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DEEP CYSTS OF THE NECK.

By J. D. THOMSON, *Am. M. B., C. M.*

On the 3rd of January, 1893, a patient, with a large tumour of the neck, was sent to me by a neighbouring missionary doctor with a note asking my opinion as to diagnosis and treatment. "Four of us," he wrote, "have seen the case, and two have called my diagnosis in question." Then came the following note: "Patient, aged thirty-eight years, from Hunan. Growth been growing for four years, more rapidly last year. Patient says it began on left side as a 'small lump.' Some of us disagree as to fluctuation being present. There is no pain, but it interferes with deglutition. The inflammatory appearance of the tumour is due to native applications."

The tumour, as I saw it, extended from the middle of the anterior border of the left sternomastoid muscle upwards into the anterior triangle of the neck, downwards to within half a finger's breadth of the clavicle, backwards behind the sternomastoid muscle and forwards, in the lower half, across the middle line of the neck, pushing, while partially covering, the larynx and trachea to the right. The skin, though red and stretched, was freely moveable over the whole surface of the tumour. From the freeness of the skin, and the tenseness underneath, it was evident that the tumour, whatever it was, was below the deep fascia. The surface appeared lobulated, and the margins more or less indefinable. Breathing, and to a certain extent phonation, as well as deglutition, were interfered with. It was non-pulsatile, and to a considerable extent followed the larynx in movements of deglutition. On defining the site of origin of the tumour by pointing to the neck of an attendant, the patient was positive that the "small lump" above referred to had its site about the middle of the anterior border of the left sternomastoid

muscle, and not close to the larynx. The exploring trocar was now used, and the tumour proved to be an unilocular cyst extending deeply below the sternomastoid muscle and containing a dirty yellowish green opaque fluid of which, however, more will be said below. On withdrawing the contents of the cyst a small solid body could be felt loosely moored to the larynx, but outside the cyst. This I took to be the left lobe of the thyroid pushed from the larynx by the growth of the cyst, which had encroached on it from behind. An exploratory puncture was essential to an absolute diagnosis in this case. The four gentlemen who had previously seen the case had neglected this aid with the result, as I was afterwards informed, that two of them had diagnosed "cystic goitre" while the other two diagnosed "sarcoma." The somewhat lobulated appearance was due to the sternomastoid and stronger bands of the deep fascia being stretched over the cyst, while the intervening weaker parts yielded more readily. The tension and the structures over the cyst may have given the impression of a solid tumour or neoplasm, though everyone knows how difficult it may sometimes be, without the aid of an exploratory puncture, to distinguish between say a round-celled sarcoma and a cold abscess or a cyst such as this. As a plea for thus emphasizing exploratory puncture in this connexion, when other signs and symptoms are insufficient, I may mention that I once saw a very eminent surgeon open a lympho-sarcoma of the neck on the supposition that it was a cold abscess. The fluid drawn off in the present case measured about 25 ounces, was of a dirty yellowish olive green colour, opaque, with a faint mawkish odour. On the surface was a fatty skin, and a drop allowed to dry on blotting paper left a greasy glistening stain behind. Sp: gr: 1026; slightly viscid; reaction faintly alkaline. A portion of this fluid was retained for further examination,* and the patient returned with the remainder in a bottle and with a note that the tumour was evidently a deep cyst of the neck developed late in life from a persistent and isolated portion of the third left branchial cleft.

In July, 1890, a patient came to me with a similar cyst. The patient was also an adult male (about forty years of age). The cyst in this case occupied the right anterior triangle of the neck; was perceptible from the

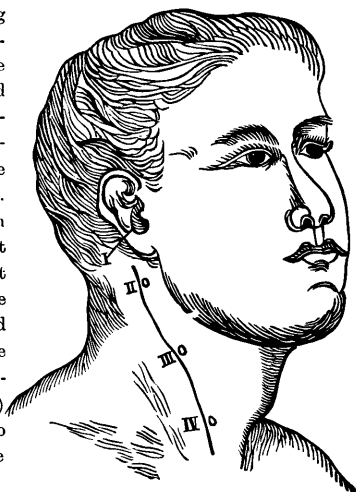
* [Note].—The portion of the fluid retained for examination was poured into a tall cylindrical glass and allowed to settle for 24 hours. After that time a glistening buff-yellow deposit, about $\frac{1}{4}$ th of the whole volume, had subsided and left a still opaque fluid above, light olive green by reflected light, amber-yellow by transmitted light. On squeezing a small drop between finger and thumb it was only slightly viscid, while the addition of acetic acid to a portion produced a very slight cloudiness (mere trace of mucin). On heating a portion in a test-tube it completely solidified, like white of egg. The addition of strong nitric acid without heat also solidified a fresh portion, while the addition of an equal volume of Liquor Potasse to another similar portion prevented solidification even on boiling. On adding a few drops to a portion of Fehling's solution previously boiled, and applying heat, no reduction of copper took place, but the Fehling turned first a deep blue, then a beautiful deep violet and lastly on boiling a thick deep brown. The buff-yellow deposit under the microscope was seen to consist chiefly of cholesterine plates with a few epithelial cells.

mouth, extended backwards beneath the upper half of the sternomastoid muscle, upwards and forwards beneath the angle and body of the lower jaw to the root and side of the tongue, crossing also the middle line under the chin and beneath the geniohyoid muscles and hyoid bone. The contents of this cyst were similar to those described above, only the colour was more of a dirty grey with curdled looking flakes floating throughout; and the odour was very offensive, probably from proximity to the buccal cavity (compare abscesses in this situation). The cyst in this case was developed no doubt from an isolated persistent portion of the second right branchial cleft. I opened it freely, scraped the whole of the interior, washed and drained. Within a month the cavity had shrunk, and all but healed. The patient returned to his home at this time, and never returned, so I had no opportunity of knowing whether or not a sinus persisted, as is said to be so common in such cases. If it had, I think he would have returned. There was apparently no distinct cyst wall capable of being dissected out had such a procedure been feasible or advisable in this case.

In the case sent me, therefore, I advised opening the most dependent part freely enough to allow the finger and sharp spoon to reach every part of the interior, to wash thoroughly with some suitable antiseptic fluid, then to scrape the whole of the interior carefully, to rewash, drain and apply dressing as firmly as the situation admitted. This, I believe, was done. The cyst-wall, at the point opened, felt, I was told, like cartilage, and grated under the knife just as if the trachea itself were being opened. About a month later, however, I received another note saying that for some time past no progress seemed to be made, and that the cavity that remained was now suppurating. I went to see the case, and found the cavity much reduced in size from what it was originally. A fair quantity of creamy pus could be squeezed from an opening near the middle line of the neck and at the most dependent part of the cavity. As this opening was now too small to admit the point of the finger it was enlarged, and a counter opening made at the same time behind the sternomastoid muscle. On enlarging the primary opening, I could verify what has been said about the cartilaginous grating. On opening behind the sterno-mastoid, there was no such feeling. The fingers now introduced could reach every part of the cavity; and, curled in the bottom, was found about three inches of a small-sized drainage tube. This tube had been lying buried there for about two weeks, and was the cause of the supuration and delay in healing. The cavity was again scraped, a strip of prepared gauze was somewhat loosely packed into it, leaving a free end projecting from each opening. The subsequent history was, I believe, satisfactory.

The pathology of deep tumours of the neck (those under the deep fascia) is interesting in many ways, and important too in relation to surgical treatment.

In Holmes' System of Surgery the authors of the sections "Surgical Diseases of Childhood" and of "Regional Surgery" trace gradations from simple 'hydrocele' of the neck through fibro-cystic to solid tumours, and seem to look upon these as varying only according to the connective tissue in which they originate; all being of the connective tissue type. Under the name of "Deep Sebaceous Cysts" the authors of the section "Regional Surgery" describe (after Langenbeck) conditions of which the two cases forming the basis of this paper might be taken as illustrations. It is further pointed out that 'dermoid' cysts in this region, contrary to what takes place in other parts of the body, are frequently below the deep fascia; no reason given. The authors, though really using or quoting the term "*dermoid*," probably mean 'sebaceous,' as true dermoids of course are found not only below the deep fascia but, for example, within the cranium, and within the abdomen in the commonest of all dermoids—those of the ovary. Diagnostic signs are then quoted with the remark added that they are hardly sufficient to distinguish in all cases without a puncture. Perhaps, when coupled with a knowledge of the genesis of these cysts, one of the first signs that would lead one to suspect the true nature of such cases is the sites or levels at which they occur, for this, as well as the fact quoted that contrary to what takes place in other parts of the body they are frequently below the deep fascia, follows from their being developed in persistent and isolated portions of foetal branchial clefts. The sites of congenital fistulæ of the neck, when these occur, are fairly fixed along the anterior border of the sternomastoid at certain levels. The reader is here referred to Mr. Bland Sutton's very interesting and instructive little book entitled "Evolution and Disease," from which the accompanying diagram is taken. So it is with cysts formed from isolated portions of what might have been fistulæ had the persistent portions communicated with the exterior in place of being isolated in the depth. What causes those remnants after lying so long dormant (as in the cases given above) to suddenly blossom out and to develop into cysts may be made clear by a fuller etiology.



In connexion with these cysts it may be well to refer to another class of tumours, viz., "Congenital Fibrocystic Tumours" which, when they occur in the neck, are usually termed "Hydroceles of the Neck," and always originate below the deep fascia. These are exhaustively dealt with by Mr. Jonathan Hutchinson in his "Illustrations of Clinical Surgery." In an appendix he gives the anatomy of a typical case of Hydrocele of the Neck (bilateral it happens to be). The tumour consisted of 'a great number of cysts filled with serous fluid stained with blood.' These cysts were 'for the most part distinct from each other like a large bunch of grapes of very various sizes, flattened by mutual pressure and adherent on all sides.' 'Everywhere the cysts adhered to adjacent structures.' They 'passed downwards into the axilla and chest surrounding the subclavian vessels and the strands of the brachial plexus.' In another place (Vol. II) he mentions that his attention had been drawn to a pamphlet by Dr. Ferdinand Ascherson on "Congenital Fistulæ of the Neck with reference to their possible connexion with the Branchial Fissures," and adds, "It is far from improbable that they (branchial clefts) have to do with these congenital, blood-containing, cystic tumours of the neck as well as with the rare forms of congenital fistulæ mentioned by Ascherson." This of course was written some time ago, and it now hardly needs to be pointed out that this is not the class of tumour that branchial clefts are to be held responsible for. One can imagine the tumour he describes to have had its origin in the delicate areolar tissue that normally exists inside the carotid sheath, inside the sheathes of the larger vessels and around the strands of the brachial plexus. In place of going on to its normal development the sheath may remain imperfect, the spaces of the areolar tissue normally containing lymph may become dilated and the tissue increase to form just such a tumour. It is noteworthy that these hydroceles tend to disappear of themselves, perhaps from the regular lymph channels being established. However this may be, some of these congenital cystic tumours are supposed to arise in the lymphatics, a few to be due to secondary changes in naevi, while it is suggested that others 'probably arise on the same plan as the laryngeal saccules of certain apes.' Reference has already been made to Mr. Bland Sutton's work, "Evolution and Disease." Any reader interested in the subject who has not already read "Tumours Innocent and Malignant" by the same author is now recommended to read the chapters on 'Dermoids' and those on 'Cysts' in this work.

Embryology and evolution come to the aid of pathology. Bacteriology is accomplishing great things, and what a field have we here in China! As knowledge in any particular branch advances the horizon widens to embrace other fields more or less artificially separated, or the field increases until it has to be allotted to various workers.

J. D. T.

POISONING BY CHLORAL HYDRATE.

By H. W. BOONE, M.D.

Patient took noon meal; then after a quarrel she took a heaped tablespoonful of chloral hydrate, and, after dissolving it in hot water, swallowed the entire quantity. This was at 1.40 p.m. I saw her at 3 p.m.; she was unconscious; could not be roused. Breathing slow, shallow, stertorous; pulse 140; pupils contracted did not respond to light. Gave hypodermic of apo-morpha, washed out stomach with stomach pump. While doing this vomiting came on, and she brought up undigested food smelling strongly of chloral. Gave hypodermic of strychnia. Patient was kept in bed with hot bottles and warm coverings. Patient was rubbed vigorously, but under the bed clothing so as to keep her warm. At 5 p.m. artificial respiration was resorted to, as breathing was worse and pulse very feeble. Repeated strychnia. At 6.30 p.m. she began to groan and toss about. She was kept in bed, but friction was continued, and she was roused up frequently by talking to and shaking her. At 7.40 p.m. urine drawn off by catheter, 10 oz. dark color. At 8.30 p.m. she was semi-conscious; from that time on she continued to improve. The patient was an unusually strong and healthy young woman, and her fine constitution may have aided in the recovery from such a severe poisoning. Keeping the person warm when poisoned with chloral hydrate is an important point. Laudor Brunton, *Materia Medica*, page 718, says, "The treatment of cases of poisoning in man is the same as in animals, viz., to keep up the temperature of the patient by putting him in a warm room, covering him with blankets and applying hot bottles."

CYSTIC SARCOMA OF UPPER MAXILLA.

By SYDNEY R. HODGE, M.R.C.S., L.R.C.P. (*Eng.*)

Mrs. Tsang, aged 38, was admitted to the Wesleyan Mission Hospital for Women, Hankow, on Nov. 29, 1889, with a large tumour of the right upper maxilla. She gave a history of three years' growth; the tumour having commenced as a small swelling near the nose. Increase of size had been gradual, with occasional discharges of pus through the gums on the right side of the mouth and with increasing pain. Had been a healthy woman and had five children, the youngest being two years old. The tumour was found to displace the nose to the left, to involve the whole of the upper maxilla, pressing down

the hard palate, displacing the teeth which were involved in the growth, and affecting the orbit. It was of an elastic consistence, and bulged prominently forward under the skin, which was darkly congested and at one place involved. An incision near the nose, at a spot which was threatening to burst, gave exit to some pus and permitted a digital examination. The whole of the antrum was filled with granular growth freely bleeding; the anterior wall of the maxilla was absorbed, and other parts involved. Operation was accepted, and after a week or ten days preliminary treatment was performed on Dec. 12 by Dr. Gillison, assisted by myself. The incision adopted was that known as Fergusson's, a median incision through the lip, prolonged round the ala and up the side of the nose and then carried in a curve below the orbit to the malar bone. The only troublesome hæmorrhage was from the deep part of the wound after the removal of the maxilla, probably from one of the palatine arteries; it was stopped with the cautery. The whole of the maxilla, with the orbital plate, was removed, part of the flap which had been involved cut away, and the opposite nasal cavity thoroughly curetted. The parts were united with silk ligatures, and the wound painted over with iodoformised collodion.

The patient rallied badly from the shock of the operation, but with careful nursing did well, and finally left the hospital on December 27.

After History.—The woman returned in October, 1894, complaining of discomfort in the wound and fearing recurrence. I examined her, but found no cause for her fear. The deformity was less than I had expected, the removal of the orbital plate not having caused downward displacement of the eye; the parts were firmly healed. On January 28, 1895, she came again, and this time alas! there was no doubt as to the recurrence, showing that in all probability I had either overlooked some small nodule at the previous examination, or, which I think more probable, that the mischief had already commenced in the deeper parts, involving nerve filament or trunks, and so causing pain. There is now a large mass protruding from the right pharynx and extending downwards as far as the finger can reach, beginning to show beneath the cheek in front, blocking the posterior nares and causing nasal voice, involving the glands of the neck and part of the lower jaw near the angle. I thought that any further operation was inadmissible, in which opinion Drs. Thomson and Gillison, who kindly saw the patient for me, concurred.

Remarks.—1. The most noticeable thing in this case is the long interval—five years—before recurrence. Judged by the ordinary standard of success, viz., three years' freedom from return, the operation was fully justified; but it shows how final recurrence, in such a vascular part, is sooner or later almost sure to take place, and one can never feel safe. "With regard to recurrence Mr. Butlin considers the prospect as very gloomy; only four cases out of sixty-four

(in which the result is recorded) having remained cured for three years." (Jacobson).

2. A word on the dangers of hæmorrhage is in place. For some reason many operators fear this exceedingly, and a preliminary ligature of the common or external carotid artery is not uncommon. My own experience, extending to three cases, confirms that of Mr. Christopher Heath, who says: "The fear of hæmorrhage . . . is exaggerated." If Fergusson's incision is adopted "there is no large vessel implicated until the last stage of the proceedings, when the bone is forcibly displaced; and then, if the operator is rapid in his movements and his assistants are prompt, pressure can be made with a sponge thrust into the cavity quite sufficient to prevent blood flowing into the fauces, until the operator is ready to pick up the bleeding vessel." (Heath).

In performing this operation one needs at least one skilled assistant and a reliable chloroformist.

SCIENTIFIC OPPORTUNITIES OF MEDICAL MISSIONARIES.

By J. B. NEAL, M.D.

Last autumn, as I went bumping along in a native cart on my way to our annual mission meeting at Wei-hien, a hundred and fifty miles from Chinanfu, and sat day after day looking out over the country; the thought came to me with great force what large opportunities we medical missionaries have for making and giving to the world scientific observations which would not only be interesting but really very valuable.

Our field in China is so wide and so little explored that it seems almost a virgin region with unlimited possibilities for investigation. There must be very few of us, scattered throughout the empire, who cannot snatch a little time from our regular daily duties to indulge in a little outside work in a scientific line. Then, too, many of us no doubt have had more or less special training in chemistry, mineralogy, geology, meteorology or botany, and could thus easily do a little work in one of these lines without very great extra labor. From a very slight experience in the line of investigating the native inorganic drugs I can testify to the great satisfaction which comes from such work, both to the man himself and from the hope that he may be adding some little to the world's stock of knowledge. But to be practical what could we medical missionaries do in a scientific line?

1st. *Keep a careful record of the meteorology* of the stations in which we are located; at least so far as to note the daily maximum and minimum temperature, amount of rainfall and snowfall and number of stormy or

cloudy days, with, if possible, the direction of the prevailing winds. This work requires comparatively few instruments and very little time, as a student or helper can be easily trained to record the daily observations at certain fixed hours. I have before me a book of "Instructions for Voluntary Observers of the Signal Service," issued by the government printing office, Washington, D.C., which no doubt could be obtained from Washington free of charge by writing to the Secretary of the Interior and making request for it. A price list of meteorological instruments which I have from Messrs. Queen & Co., Philadelphia, Pa., gives the following :—

Maximum thermometer	Gold	\$4.50
Minimum "	"	3.50
Smithsonian standard thermometer	"	5.00
Rain gauge, galvanized iron	"	2.50

So that less than twenty dollars in gold would be required to fit one out for making the observations outlined above. Of course if it is desired to go into the matter more deeply a large amount may be spent for additional instruments such as barometer \$30, hygrometer \$6, anemometer with whirling apparatus \$26, etc.

The United States Signal Service welcomes reports from voluntary observers, and I believe will furnish blanks, free of charge, for sending in reports upon. Such reports upon the meteorology of our various stations, combined with some information in regard to prevailing diseases, would surely help to keep our Boards at home from making such blunders as they often do make in sending unsuitable men and women to unsuitable locations, to the great detriment of their health and usefulness.

2nd. *Work up the Botany of our various Regions.*—This, I am quite aware, requires some special training and some aptitude for such work, but surely some of us at least are capable of doing something in that line, and even if we cannot identify species might perhaps have skill enough to collect and press specimens and send them to some authority in Europe or America for identification.

Mr. Couling, of Chingchowfu, in Shantung, is following this plan, making collections of plants in his region and sending them to the Kew Gardens in London. He keeps a careful record of the specimens sent, so that when identified in London he may be able to recognize them here.

3rd. *Study the Mineralogy of our Stations.*—Anyone who has had practical training in chemistry at home, and especially in mineralogy, ought to be able with the help of Brush's System of Mineralogical Analysis to identify most of the rocks and minerals to be met in the course of our walks about the country, and perhaps might add much to the knowledge of local geology. This is a study which can so easily be carried on during the winter, and especially during the

slack time at the Chinese New Year, that it seems to me we certainly ought to be able, as a body of men, to add something in this line to the general knowledge.

4th. *Investigate the Native Materia Medica.*—Those of us who are fond of chemistry and have a laboratory at our disposal may well spend a little time in a study of the resources of the native shops in the way of inorganic drugs, even though it may be a more or less disappointing field, while those who are botanists or pharmacists have a wide field open to them in the line of vegetable drugs. I wonder what has become of our committee which was appointed in 1890 to investigate the native materia medica. The more I have to do with medical students the more I am convinced that we owe it to them to make them well acquainted with the native resources in the way of usable drugs, so they may be independent of the foreign supply in case of necessity. Many of them, practising far away from foreign centres, will find it extremely hard to carry on their practice if solely dependent on what they can obtain from abroad.

The above are merely suggestions as to lines in which we might make ourselves useful and happy more or less aside from our regular medical duties. We all of course feel that our principal business must always be to minister to the sick and tell them of our blessed Saviour Jesus Christ, striving in every way to please Him and help the Chinese.

But in addition to this I cannot feel a man is any the worse for having a hobby apart from his main business which will be a recreation to him. Nor do I think our Journal will be any the weaker, but on the contrary far more valuable for containing records of such independent investigations.



“RED CROSS” WORK IN CHEFOO.

By A. W. DOUTHWAITE, M.D.

A few days after the declaration of war by Japan I called on General Sen, the commandant of the Chefoo garrison, and represented to him the urgent need of some preparation for the treatment of wounded men, in the event of an attack on Wei-hai or Chefoo. I explained to him the principle of the “RED CROSS” ASSOCIATION, and offered to do all in my power toward the efficient management of a military hospital, if he would provide the necessary funds and place a suitable building at my disposal.

The General, who has shown unusual solicitude for the welfare of his soldiers, seemed highly delighted by my proposal, and after consulting the

Taotai, offered me the use of a fine suite of buildings, recently erected on the cliffs east of Chefoo. In a few days the RED CROSS flag was floating over these buildings, and a squad of stretcher-bearers, in white tunics, with a red cross on each arm, were being daily drilled in the art of handling wounded men. After toiling hard to make these men as efficient as possible they were suddenly removed to some other post, and a fresh lot of recruits put in their place, without a word of explanation, so I had to do my work over again. Some weeks later these men also were removed, so I quietly retired from the post of "honorary drill instructor," and decided to have no more to do with the "Red Cross Hospital" unless it was placed entirely *under* my control. On this decision being made known to the General he called on me, promised to do whatever I wished, and left \$200.00 with me for the purchase of drugs, &c.

After that I lost no time in getting ready for the work I knew I should have to do, for I had received information from Japan that Wei-hai would certainly be attacked, and that Chefoo would probably fall into the hands of the invaders before they pushed on to Peking.

The first part of this prediction has been fulfilled, and the "impregnable fortress" of Wei-hai has been utterly demolished, with the exception of Liukung island, of which the Japanese have taken possession.

The attack on the mainland forts was commenced on the 29th or 30th of January, and, as usual, the Chinese soldiers retreated in confusion after firing a few shots. Many of these poor fellows were killed, others died from loss of blood or cold, for there was no ambulance corps at hand to take care of the wounded.

All who could run, however, made good use of their legs, and fled toward Chefoo, some took refuge in neighbouring villages, but obtained very little mercy from their own countrymen, who either utterly refused to help them or disposed of them by throwing them into the sea.

On February 2nd the first lot of wounded men reached Chefoo, and were admitted into the Red Cross Hospital and the Hospital of the China Inland Mission. For several days the stream of wounded men flowed in till it became quite impossible for us to accommodate more, and the rest had to be sent to the Kwan-yin-t'ang, where they were placed under the care of a native doctor.

The condition of these poor men on arriving here was extremely pitiable, for they were hungry and cold, their wounds all undressed, their clothing saturated with blood, and their persons more than usually filthy. How they dragged their wounded limbs over the forty miles of road from Wei-hai to Chefoo is a marvel to me, and one wonders that so many succeeded in reaching this place

Character of the Wounds.

The men who arrived on the first day were only slightly wounded, so had been able to outstrip their comrades, but on the second day (Sunday,) several serious cases were admitted, some of which required immediate amputation.

The points of entrance of the bullets were in every case small, but the exit holes were large and lacerated. In a few cases the bullet had apparently gone through the tissues revolving on their short axis, tearing the flesh into shreds in their passage. In every case where a long bone was struck it was finely comminuted, and split longitudinally, so amputation was the only treatment possible.

In one instance the ball had passed clean through the man's right lung, and did so little damage that, beyond a slight cough, with occasional spitting of blood, he suffered no inconvenience. In another case the bullet entered just in front of the left ear, passed through the external meatus and the sterno-mastoid muscle, under the trapezius, and emerged between the scapulæ, twelve and a half inches from its entrance point. The man has recovered, with nothing to remind him of his wound except two small scars and a feeling of numbness in the lobe of his left ear.

One poor fellow was shot in seven places, yet walked every step of the way from Wei-hai, and has made a good recovery; another was shot through the right shoulder joint, and a few minutes later was again struck in the back, the ball breaking off the spinous process of one of the lumbar vertebræ, and lodging beneath the one above it. He too is progressing well.

A young man had the index finger of his left hand torn off, and the whole hand badly smashed by the explosion of a shell. He refused amputation, so an effort was made to save the limb, but tetanus set in, and in three days his whole body was in a state of rigid spasm. Then, when told that nothing but amputation could save his life, and that he would probably die in any case, he gave consent. For a few days after the operation his case appeared almost hopeless, but he is now able to open his mouth fairly well, and will doubtless be free from all muscular rigidity in a week or two.

A strong well-built young soldier arrived here a week ago, having been twenty days on the road from Wei-hai. He was shot through the thigh, and both feet were so severely frost-bitten that I had to amputate through the lower third of each leg. He said that for several days he could get no aid from anyone, and for three days laid on the floor of a hut, exposed to the severest weather, without food or water. Afterwards he crawled away, and somehow managed to reach Chefoo, where we gladly took him in and cared for him. Some of the most serious cases admitted into the hospital were those of wounded tendons, especially those in which the bullets had passed

over the dorsum of the feet, not rupturing the tendons, but tearing their sheaths. Probably these would have been less serious had they been promptly attended to, but after the patients had walked for three days over a rough road their otherwise slight wounds assumed a most severe character. Four such cases are now in our wards, and one will probably require amputation.

Treatment of Wounds.

Our first effort was to obtain local cleanliness—bathing on a large scale was out of the question, owing to the crowd of patients—and then each sinus produced by the passage of a bullet was carefully syringed with 1 per cent creolin solution to remove shreds of clothing, etc. The wounds were then dressed with ung. iodoformi, with pads of oakum outside, and bandaged, so as to secure as perfect rest as possible; to this end splints of hoop iron were used wherever convenient, and proved of great service. After amputations the stumps were dressed with Hardman's wood-wool tissue (sublimated) or carbolized gauze and absorbent cotton.

Where the skin was extensively lacerated, as in wounds from the explosion of shells, I used dry dressing of fine oakum, dusted with a mixture of iodoform boric acid.

All dressings were changed once a day, and although this involved considerable labour we had the gratification of seeing the patients rapidly recover.

Supplies.

Fortunately I had provided an extra stock of everything likely to be required, but had not expected such a crowd of patients, so my store of bandages was soon exhausted. For the first week we used three pieces of calico each day, that is, 120 yards, and, as all the native shops were closed none could be purchased.

I mentioned this fact to Mr. Lavers, of the firm of Cornabé & Co., and he generously made us a present of fifteen pieces of calico, and ere that was used up I received a sack of roller bandages from Mrs. Anderson, of Shanghai. This was followed by a bundle of bandages rolled by the patients in the Margaret Williamson Hospital, Shanghai, and thus our needs were more than supplied.

From Mrs. Anderson I received also a case containing a supply of chloroform, carbolic acid, ligature, absorbent cotton, &c., a most acceptable present.

As to money there was no lack of that, for I have a long list of the names of those who generously came forward and volunteered whatever help was needed.

Thus I was enabled to provide for the hundred and sixty wounded men placed under my care, on a far more liberal scale than would have been possible had I only my usual income to depend upon.

The Taotai sent twenty suits of wadded clothes, and General Sen has paid about two-thirds the cost of feeding the patients.

I cleared the Chefoo pawn shops of their stock of coverlets, and robbed our girls' school—then closed—of mattresses, and so succeeded in making the patients comfortable.

Helpers.

To properly treat such a crowd of patients single-handed would have been impossible, and, happily, I had no need to make the attempt. For the first three days I had no professional aid, even my one native assistant was away, but I was fortunate in having the help of Miss Dobson, a hospital nurse just arrived from England, also of the Rev. F. W. Baller and two daughters, who threw themselves heartily into the work of dressing, and have continued to devote the greater part of their time to this most unsavoury task.

Many other friends volunteered their assistance as dressers, notably Messrs. McOwan, Schmidt, Murray and Alty, of the C. I. M. Boys' School, Dr. and Mrs. Corbett and Rev. G. Cornwell, of the American Presbyterian Mission, Rev. H. J. Brown, of the S. P. G. and Mr. Ottewill, of H. B. M.'s Consulate. When the work became known among the officers of the numerous men-of-war in port many of the surgeons visited the hospital and offered to help in operating, but our thanks are especially due to Dr. MacNab, of H. B. M. S. *Undaunted*, who while his ship was in port was almost daily at work among our patients.

To these friends and others who worked equally hard in their homes in preparing bandages and dressings is largely due the satisfactory record of only four deaths among the one hundred and sixty wounded men admitted into the hospital.

List of Amputations.

Of thigh	...	...	...	...	...	...	2
„ leg	...	...	...	...	...	...	6
„ arm (shoulder)	...	...	...	...	...	...	2
„ forearm	...	...	...	...	...	...	5
„ finger	...	...	...	...	...	...	2
„ toe	...	...	...	...	...	...	4
							<hr/>
							21
Deaths after operation...	...	...	...	...	...	...	2
„ from exhaustion	...	...	...	...	...	...	2
							<hr/>
							4

Eight of the more serious cases sent to the Kwan-yin-t'ang were subsequently removed to the hospital of the S. P. G. Mission, which is at present closed to regular work. Here they have been cared for by Dr. Thomas, of H. M. S. *Porpoise*, Dr. Kirk and myself; the Rev. H. J. Brown undertaking the work of dressing, &c.

After the fall of Liu-kung-tao Dr. Kirk, the surgeon of the Chinese military and naval hospital at Wei-hai, brought about thirty of his patients to Chefoo and placed them in the Kwan-yin-ta'ng, where he continues to attend them.

Chefoo, 10th March, 1895.

Since writing the above I have heard that many wounded and frost-bitten soldiers are lying in the villages near Wei-hai and Wen-teng, so I shall send for them.

Inaugural Presidential Address.

To the Members of

THE CHINA MEDICAL MISSIONARY ASSOCIATION.

Knowing that it has been the custom of our Association to choose its president from among its older members—when my name was proposed for the honored position I realized that I must now be considered as ranking among the “veterans” working in China.

Still I thank my associates for the distinction they have conferred upon me, even if the dignity tells of advancing age.

It hardly seems so long as fifteen years since I came first to China, but the almanack says it is the fact. These years, though brief to look back upon, have witnessed important changes in this great empire.

Nolens volens, forced by foreign pressure these sleepy people *have* moved forward, even if like the parallax of a distant star it takes close observation to discover much motion.

Telegraphic lines and railroads have been extended, audience with the emperor granted, and the necessity for a study of other matters besides the classics in the training of officials has been acknowledged.

To us physicians it is especially gratifying to note that during these years an increased estimation has been placed upon our work by the Chinese, our clerical brethren and the Church at home.

Care for the bodies as well as the souls of men now has its recognized position alongside with preaching and teaching. In all the missionary centres of China there is the hospital, while in every plan for opening new stations estimates for the doctor and his drugs take a leading place. No object excites more interest in the home Churches. Even the treasures of our Boards have a mild attack of the same enthusiasm and open more freely their money boxes on our behalf. I can well remember the time when medical missionary work was not thus booming, and the sending out of an unordained doctor or of giving him much more support than he was able to pick up for

himself were new ideas to most. Time and experience have proved that reaching the soul through sympathy for the body is as efficacious now as it was in the time of Christ. To get fish into the Gospel net a dose of medicine has proved to be as potent a bait as a theological sermon, even if the "early fathers" have neglected to mention the fact.

Encouraged thus by the past the members of our Association must still press forward. The indications are that Japan, the stalwart child of the latter part of the 19th century, proposes to administer a thorough course of physic and massage to the decrepid Celestial. The result will be new life in every part. Seeing as we do the sufferings of this patient people on the sick bed, as well as in the field of battle, and knowing how much of this suffering could be alleviated if only we were allowed free play, as doctors we cannot but rejoice at the approaching change. We will have an important part to play in the new day which after the storm will break on this land.

We must plead for a thoroughly equipped medical department in China's new army, demand the passage of laws in favor of public health, work for the suppression of quackery and the education of properly trained native medical men.

What a field of usefulness does the helping forward of such matters open up to us all. Nor must we forget that besides being medical men we are also missionaries. No civilization of permanent value can be grafted unto this people which has not Christianity as a basis and balance. In the struggle between the old and the new something more than efforts dictated merely by love for humanity will be expected from us. In our own way we must assist in building up a strong native Church and help to form popular sentiment in favor of Christianity. Especially can we do much in training consecrated medical students, who will be a benediction to their own countrymen, Christian men of influence, wherever they practice their profession.

Our united thanks are due to the retiring officers, especially to the late editor of the Journal, for their efforts in behalf of our Society. It will be ours who succeed to their places to endeavor to make our organization more and more a bond of union between us.

When railroads come in this land it will be possible to meet in convention and discuss together matters of common interest.

However till that happy day arrives the "Journal" must be the chief means in keeping up intercommunication.

If each through its pages systematically tells of his work and surroundings mutual knowledge will be obtained each of the other, even if we chance personally never to meet.

B. C. ATTERBURY, M.D.

Peking, 12th March, 1895.

The China Medical Missionary Journal.

VOL. IX.

MARCH, 1895.

No. 1.

For five years this Journal has been under the able management of Dr. Percy Mathews; in that time it has more than doubled its size; its general get up has been immensely improved, and its position in current medical literature more fully assured. The amount of hard work that this has necessitated, patient and unobtrusive work, cannot be imagined by those who have not had to attempt a similar task. The Journal and its supporters owe a heavy debt to our late editor, ever courteous and obliging, and it is with more than ordinary diffidence that the present one enters upon his work. The task set before him is not an easy one; he has to try the experiment of editing the Journal at a distance from Shanghai. It has long been foreseen that we could not expect our Shanghai medical brethren to bear this burden for ever, and that a time must come when the attempt must be made to do the work elsewhere. That time has come now, and the new editor confidently appeals to his brethren for their support. Dr. Fryer, of Shanghai, will render permanent assistance, and he feels sure that other help will be forthcoming. He will endeavour to continue the Journal mainly on the lines of his predecessor, though a few minor changes will be noticed. Whether the Journal can maintain, or ever rise above, its past position rests more with the members than the editor: if each one will take a personal interest in it, and will exhibit that interest by *constructive* and not *destructive* criticism, the issue is assured.

The recent publication in the *B. M. J.* of Dr. Manson's paper on "Malarial Organisms," and of Dr. Ernest Hart's address before the Indian Medical Congress on tropical diseases, offers a favourable opportunity to remind ourselves of the duty which lies upon us, as medical missionaries, to take our part in the great battle we are waging against disease and death. That duty is not discharged if we rest content with merely handing on the medical traditions of our fathers and treating well-known and easily diagnosed diseases on the old lines, whilst doing little or nothing to elucidate the nature of the many complaints which every honest man must acknowledge he knows

little about. To do this is a duty we owe not only to the people we have come to deliver from their many ills, but also to the medical missionaries who shall follow us, and to the large and increasing body of foreigners, both missionary and mercantile, whose ranks are every year thinned by tropical diseases we neither thoroughly understand nor successfully treat. Busy men as we all are, and overworked as most of us are, we only share in this a burden which is not peculiar to medical missionaries, but is the lot of all earnest medical men the wide-world over, and it will probably be found to be true of us, as of most men, that those do least who have the least to do. Situated in a tropical country, with exceptional advantages for observing and recording, clinically at least, many ill-understood forms of disease we cannot escape the responsibility which belongs to our position, the sufficient answer to every plea of pre-occupation being "these ought ye to have done, and not to leave the other undone." Of all the diseases which come before us none is more widely prevalent, more protean in its manifestations, or claims more victims than malaria. Few of us, probably, but have long ago discarded the quinine test as being exceedingly unreliable, and periodicity is of little help in distinguishing between continued fevers of a remittent type. To be able to say whether a case of lung disease with high temperature is a true tuberculosis or a pseudo-tuberculosis due to malaria, and whether an acute fever of a remittent type with bowel complication is true typhoid or a paludal remittent, is of the highest moment to our patient, and oftentimes of the deepest import to the work of God; whilst the difficulty of deciding whether a post-operative or a post-puerperal temperature is septic or malarial is of daily occurrence: and yet with such problems facing us every day and for many years past, what have we as a body of medical missionaries done to solve them, or what weapon have we added to our means of defence or attack? A few contributions have been made: papers such as Dr. Davenport's in the last number contain valuable observations, whilst long ago the pages of this Journal contained a clinical note on a form of lung complication in malaria very similar to that which Dr. Duba has described under the name of pseudo-tuberculosis.

The two papers above mentioned dealing with the technique of demonstrating the malarial bacillus, the existence of which has long been known to most of us, have placed within the reach of all the means of making valuable contributions to the study of this fell disease, and of lifting a burden of anxiety from both patient and physician in many a difficult case. Henceforth there will be no excuse if, with such abundant material around us, we do not take our proper place in the ranks of those who are trying to trace the life history of this parasite. Much can be accomplished with little apparatus. Laveran, to whom we owe most of our knowledge of the malarial parasite, worked with "a needle and a string, a slip and cover-glass, and a microscope

with a magnifying power of some 400 or 500 diameters." The whole secret of success in the search for the bacillus is (1) to know what to look for, (2) to know how to look for it, (3) to have patience to look for it. For the first we must refer our readers to Dr. Manson's admirable plates published in the *B. M. J.* On the second we quote from Dr. Hart's paper. "The whole secret and principle of malaria blood examination" is to so dispose the blood corpuscles as to spread them out flat on their faces. "Wash cover-glass and slip in alcohol or ether. Make them thoroughly clean and dry. Wash the finger of the patient with soap and water, afterwards, if necessary, with ether and dry it. Ligature the finger and prick it in the usual way, but prick it very lightly; this is important—prick it very lightly, a big drop of blood is a snare. Wipe the first drop of blood which exudes away, then gently press the pad of the finger between finger and thumb, and as soon as a drop of blood no bigger than a pin's head has appeared take this up by touching its apex—if I may use this expression—lightly with the centre of the cover-glass. Then drop the cover-glass on the slip. If finger, cover-glass, and slip are thoroughly clean and dry, and the operation has been rightly and quickly performed the blood will run out in an exceedingly delicate film, in which, after a minute or two, all the corpuscles will be found lying flat on their faces. Best make six such preparations at a sitting, for some are sure to be failures, having the corpuscles in rouleaux or imperfectly disposed and isolated" . . . "Select only the best slides and search them with a twelfth immersion lens in a fairly good but not too bright illumination" . . . "Look in your slides for ill-defined, palish, nebulous bodies containing dots or clusters of black pigment, and lying inside blood corpuscles . . . The black pigment particles attract the attention most readily. If you see such a particle or cluster of black particles in a corpuscle, focus carefully, scrutinise carefully; see if they lie in a pale, ill-defined body; look for changes in the position of the particles and for alterations in the shape of the pale substance in which these are imbedded; in other words, look for evidences of life in this inter-corpuscular body. In some slides you may find one, or two, or many such inter-corpuscular bodies in every field; in other slides, and generally, you will have to search many fields before you find one." It is important to remember that the patient whose blood we wish to examine should not have been taking quinine recently. In making clinical observations Dr. Patrick Manson's Malaria Chart, published in the *B. M. J.* of December, will be found of great use; the observations should be taken several times a day if possible. We have thus referred, in some detail, to malaria as the one disease with which we all, probably, come more or less in contact, but there are other diseases around us which need thoroughly working at. To this work there are but two periodicals exclusively devoted; our own Magazine, supported by a large number of medical missionaries, and the

Customs Medical Reports, supported by a limited number of the port doctors. We know the good work the latter have done, let us see to it that our own Magazine does its honourable share.

In the Edinburgh Medical Missionary Society's Magazine, Vol. vii., No. 2, there is an account of the establishment of "The North India School of Medicine for Christian Women." This important movement was started in December, 1893, when "all the lady doctors, who were willing and able to attend, from the Punjab, north-west provinces, and Rajputana" met together and "resolved to send an appeal to all the Societies working in these provinces to help to start a medical school for Christian women somewhere in the north of India." This appeal met with encouragement, and the Baptist Zenana Missionary Society set one of their lady doctors free to act as principal of the school. The school has just commenced work at Indiana "under the auspices of a Committee of Delegates from the various medical missions to women in North India, together with Dr. Valentine, of Agra, the Rev. Dr. Ewing, of Lahore, and others." Committees in aid have been formed at home, and the scheme fairly launched. This school is established for Christian Eurasian and native girls; experience having shown that a four years' course in the government schools, away from Christian influences, in contact with heathen students, and under heathen professors, carries with it great risk to the moral and spiritual life of these young converts. To shield these young girls from such evils, many of whom "have been trained in mission schools, and had their scholarships from mission funds," and to cherish the desire which many of them have to become missionaries, is the laudable aim of this Christian institution. Yet in its infancy, and on its trial, we shall watch its development with prayerful interest, and shall be keenly disappointed if the Christian Churches do not rise to this great opportunity. This is the second time that the missionary bodies working in India have led the way in showing the feasibility of practical union; their former venture, the Madras Christian College, is a well-known and conspicuous success. To us in China there seems to be given rather the genius of talking about union than of exemplifying it. The Shanghai Conference of 1890 gave great prominence to the subject, but beyond the appointment of a few committees, and the exchanging of a few courtesies, nothing seems to have been done. Some time ago it was suggested, in this Magazine, that our medical missionary work formed a basis upon which the first stones of union might be laid, and lately Dr. Stuart, of Wuhu, advocated, in these pages, a central China medical school. The thing may not yet be feasible, but we should be working towards it. The problems before us are not so different to those facing our Indian brethren. If we are

ever to bring the benefits of Western surgery and medicine to these suffering people, and to exhibit those benefits along with, and in their proper relation to, the Gospel of the LORD JESUS CHRIST, the source from whence they flow, we must do it by means of trained native Christians. We need a good central school, replete with every modern help to teaching, with a residential college, and under a Christian head, for the students, and with facilities for clinical work in one or more contiguous hospitals. Such a college should have a four or five years' course and give a recognised diploma. Our American brethren at Peking and Canton have already done good work in this direction, and so has Dr. Neal at Teng-chow-fu, but their efforts have been largely local and chiefly for their own missions. The unique position of missionary work in the Yang-tsze Valley at once emphasises the need and affords the opportunity for union. Here at least a dozen different societies are at work, most having their own medical missionary agents, and yet no one strong enough, in money or men, to establish the needed institution. Feeling deeply, as they all more or less do, the need of a thoroughly trained native medical agency, yet little is being done in this direction, and grand opportunities are being lost. We are probably on the eve of great changes in China; exactly what those changes will be we cannot say, but there is a general expectation that Western education will receive a great impetus. Are we medical missionaries ready with some broad and generous scheme of medical education which will unite us? Believing, most intensely, that such union is possible, and that the Yang-tsze Valley affords the best field for its realisation we commend this subject to the earnest, and prayerful, and practical consideration of our members.

Evangelistic.

FROM DARKNESS TO LIGHT.

Whilst on a visit to the Pao-ning-fu station of the Inland Mission in the early autumn of 1893 I first met the man Liao, of whose brief but bright course I wish in these lines to tell.

He had come from his country home about 140 *li* from the city, led by relatives, in the hope that something might be done for his sight, which had failed for about two years, till now it was nil.

A work of grace was already in progress in his country side, and he himself was just beginning to take his stand as a seeker for the truth and just learning to pray. Placing before him the nature and prospects of his case, which was one of double (lenticular) cataract, primary, in a man of about thirty-five years, I proposed his visiting us at Ch'en-tu later on. Returning home this proposal was met with many timid objections and forebodings from his wife and mother, who said that he would be so far away that they would hear no news of him, and in all probability he would never return. But his own faith and eagerness overcame, and in the late autumn, with his brother, he started out on his 800 *li* journey, being all along the way the subject of many questionings as to his intentions and prospects in going to Ch'en-tu. On his arrival it was cheering to see the simple faith in which he resigned himself to God's will and to our care. During the intervals of waiting, between successive stages in which the two eyes were attended to, there was a constant stream of prayers and thanksgiving going up from the bed of this trustful man, and by the time his bandages were off, and he was once more enjoying the luxury of walking about a seeing man, we all felt that he was already a decided and growing Christian, and a bold and joyful witness for the Lord. Being a fairly well-to-do farmer he was able to prolong his stay a few months after treatment, and when in the early months of 1894 I was starting with my wife on a round visit of our out-stations my proposal that he should accompany us and see his fellow-Christians in these parts before returning home, was gladly accepted.

And it was a pleasure to have him, for his bright, happy, singing spirit and eager testimony to God's goodness to him, in soul and body, was a constant refreshment to us and a help to the country Christians. He was full of ardour to return and witness among his own people, and after he had returned we heard from the Pao-ning friends that he was carrying out his purpose, and that he had already helped, with simple remedies given him, to save two or three lives from opium suicide. One short year of life in the knowledge of the truth and about half a year in the enjoyment of restored

sight, and then this new-born soul, who had put more into a few months of serving Christ than some do into years, received his home call very suddenly.

He was present at the summer reunion of Christians at Pao-ning, at which he, with some others, was baptized and gave joyful testimony. Whilst still there, spending a few days, he was seized with an acute illness which, in spite of all that the friends there could do for him, ran its fatal course in a week.

It was a sad shock to all, but faith can say, "Thanks be to God who giveth us the victory," and from the swift but well run course of this native brother we feel a fresh force in the words, "Wherefore, my beloved brethren, be ye stedfast, unmoveable, always abounding in the work of the Lord, forasmuch as ye know that your labour is not vain in the Lord."

H. PARRY.

JOTTINGS FROM MY JOURNAL.

By M. E. P., *Wesleyan Women's Hospital, Hankow.*

Perhaps it is well that we should sometimes realise keenly the dense dullness that seems to render futile our endeavours to impart a little knowledge or kindle interest in unseen things. Last evening, during our chat with the patients in the ward, we addressed ourselves especially to one new patient. Speaking of the soul we found the idea of a soul was new to her. How were we to explain? The Chinese nurse tried, and asked her where her soul would go when she died? "Into the country!" was the prompt reply.

We tried to tell her that unseen things were real, and said, "You see your hand?" looking at the big sleeve, and thinking to take said hand to enforce the illustration. But no! the hand was withdrawn from the sleeve and tucked snugly inside the loose, warm garment, after the well known manner of Chinese women.

"And your soul seems just as un-get-at-able" we thought. Perhaps the feeling of failure was depicted in our face, for the Christian nurse spoke unwonted words of appreciation of what was said. She talked very patiently, till our auditor certainly brightened wonderfully, and we hope a prolonged stay may be such means of good to her as it has been to others.

Last evening (Sunday) when we went down, the two girls, each with her Bible, (they have both been in our day-school and read very well), were repeating and explaining the morning's text and the Golden Text of the

Sunday-school lesson and talking them over with the patients. The elder nurse has been recently baptized, and is, we believe, sincere and earnest in helping to reach the patients.

We had one of the chats last night that one sometimes drifts into when speaking a word of cheer to a patient. The nurses came round the bed, and conversation turned on a walk outside, and the familiar cry of "Yang Quei Tsī" (foreign devil) that greeted us. "Ah!" said one of the nurses, "if 'Shiao Chi' knew all the things they say and how wicked they are! Up above us here, and below, and all around us, are people who do *such* bad things—both men and women. How nice it must be in England, where girls can walk outside and travel safely!" and the patient took hold of my hand and told me how she had been "ma'd" (cursed) for her unsightly lips, and because all her children had died. "Yes," added another girl, "if a person has lost a tooth, or hair, there are bad words used and swearing, and the little children know all the evil things that are done and said." Which last we can verify.

"When all Chinese people know your doctrine how different it will be," went on the other woman.

"Yes," we thought, "we will keep on sowing the word of truth; and, though the sowing seems long and often retarded, the seed shall surely grow."

We saw a "touch of nature" in the dispensary the other day. Two women came with a little boy who had a boil on his neck, needing the knife. The woman, who in reply to our inquiries said she was the mother, held the child during the little operation, and though she was very kindly concerned at the little boy's pain we were struck with the other woman, who behaved as though the knife were applied to herself. The child, when released, threw itself into her arms, and was received in right motherly fashion. "Why, it is evident *you* have the mother's heart—how is it?" And then they explained. It is the custom if the elder brother has several sons, and the younger none, that the former shall present the latter with one of his own. In this case the son had not long been made over to the foster parents.

We extract the following from *The Central China Wesleyan Missionary Prayer Union* :—

"I have thought, perhaps, our friends would like to know how a missionary, seeking health at the bungalow, spends his time. Of course a great deal will depend upon how ill he is. Some can do little but lie day by day enjoying the cool breezes and thanking God for such perfect rest and quiet until strength slowly returns. Then gradually come chair rides, and then walks, until strength enables him to fill up the hours with occasional study. But the rest is not always so *perfect*. Curious but friendly women from

neighbouring villages come, sometimes in good numbers and not infrequently with their husbands and friends, to see the foreigners and their house, and one's longing for quiet has, for the Master's sake, to be repressed, whilst, as far as possible, they are allowed to wander over the place, or sit and chat and drink tea. Sometimes they arrive at the time of morning prayers, or on Sunday during worship, and then the opportunity is embraced to preach Jesus. Some, if not most, have some ailment they want cured; and attention to their wants creates kindly feelings and disposes hearts on future occasions to receive the Word of Truth. Thus in reading, or studying, in receiving visitors, or in quiet restfulness, the morning passes on. The more quiet afternoon gives time and opportunity for prayer and united Bible readings; and very much blessed we have been this year in reading through the 1st Epistle of St. John and the Epistle to the Galatians. In the cool of the evening comes the healthful scramble along the hills, or an occasional visit to a sick one in some village, and as our walks often take us through villages we find a kindly notice of the little babies, and a kiss by an English mother, reaches a China woman's heart as readily as an English mother's. We trust that, some day, as the ground is thus being prepared, our brethren at Wu-sueh may have a good work spring up on the opposite side of the river. One evidence that our occasional residence has not been without its effect year by year has been given this year by the erection of a hut shrine, with an idol, specially brought from a distance, close to our bungalow. The natives avow that the object is to counteract our teaching on those who continually visit us. Again, as always, the coming of the Truth arouses the people from their lethargy. As the day closes we gather for prayers on the verandah, and with the silence of the hills around, with the waters of the great Yangtze gleaming far below us in the silvery moonlight, we have again and again sung

‘Lord! it is good for us to be
High in the mountain here with Thee;
Here in an ampler, purer air,
Above the stir of toil and care.’”

MEDICAL MISSION WORK IN CENTRAL CHINA.

The natives have a saying, “The winds of Kuei-cheo and the sunshine of Sz-chuan” (*i.e.*, the southern part of Sz-chuan). This well describes the climate.

Its altitude above the sea: Sz-chuan as far as Chen-tu 1,000 feet, Kuei-cheo 4,000 feet, and Ynn-nan 6,000 feet and upwards to Burma and Thibet.

In these three provinces, though Dr. G. John made an early itineration, and Rev. Spencer Lewis has long worked in Chung-king, the C. I. M.

have, second to the Roman Catholics, been the pioneer missionaries of the Gospel. During the last nine years the Lord who openeth, and no man shutteth, has given us many open doors for teaching His word to the people. At first there were only two Protestant stations in Sz-chuan, now twelve; in Yun-nan formerly two, now five; in Kuei-cheo one, now four stations. Seven and a half years ago Dr. Parry and the writer commenced two medical missions in Chên-tu. Before long we gave chloroform to a Manchu boy in the garrison city and cured him of harelip; and a year later chloroform to a Chinese hawker and removed a fibrous tumour, size of a child's head, from his arm; twenty years previously a native surgeon had ligatured a small one for him. In January, 1889, by means of midwifery forceps I saved a Chinese woman and child, Miss Fosbery helping. These were probably the first cases of their kind in the west of China. Independently of the medical work crowds of Manchu women and children came to visit my wife and child, Mary, and heard from our companions the Gospel; in addition twice a week I preached in all their avenues and received many invitations to attend Manchu patients in their homes. Thus during the two and a half years of our stay in Chên-tu all they who dwelt in the garrison city heard the word of the Lord Jesus, besides many Chinese in our neighbourhood, and of these latter five persons confessed their faith by baptism, while Dr. Parry at the old mission chapel had many more accessions to the former congregation of Chinese. But of the Manchus none, I think, except a few Roman Catholics, have professed Christianity.

One day I entered a guest hall just as the eldest son had finished worshipping a copy of the Sacred Edict put up instead of an idol, as it was the 15th day of the month. And in the country I witnessed a Chinaman enter a temple and, after noticing which was the biggest idol, make his obeisance in thanksgiving for protection when ascending the mountain. I then asked this old man whom he was worshipping. He felt that he was taken by surprise and stammered out, "I do not know." I remembered our Lord's words (John iv. 22) and told him of the only true God. Five years later 500 miles from this mountain a coolie said to me, "I remember your preaching at that idol temple."

After leaving Chên-tu we removed to the capital of Kuei-cheo province. Here Mr. Windsor had treated 200 Chinese as in-patients for opium-smoking, daily instructing them in the way of salvation, and in the mandarin's houses had saved many attempted suicides. This prepared the people to admit me to their homes for serious cases and come to the dispensary again and again for milder illness.

During our four years' residence there were 4,000 patients, of whom 400 were attended in their homes. Four of the most interesting cases are the

following. A silver refiner, treated many months for dropsy, was tapped three times; but one night his neighbour's house caught on fire, and he had to spend the night on the street. This resulted in a fatal chill; but, having often heard the Gospel, the morning before his death he destroyed every image and vestige of idolatry in his house, and that evening in the presence of his family looked upwards saying, "O God! let me depart in peace," and in a few minutes gently breathed his last.

The Chi-fu of a distant city had a small piece of bone chiselled from his jaw in our house, and recommended us to many mandarin families.

A cow-herd boy running away from home fell from the city wall breaking his left thigh bone and left side of his jaw. Next day the Superintendent of Police committed him to my charge, as the local doctors were unable to get him to take food. In three months he quite recovered and learnt from my mother the text John iii. 16. An ex-secretary having broken the neck of his left femur, and hearing of the boy's recovery, endured the long splint for ten days and lesser means for other twenty days and quite recovered. He read a copy of one of the Gospels through at least once.

During these four years one woman neighbour, and one lad—my medical student—were converted, and many patients frequently attended the Sunday services. But the work has been essentially sowing the seed, and watering where others have sown.

W. L. PRUDEN.

We extract the following from the Fourth Annual Report of Ichow-fu Dispensary of the American Presbyterian Mission, under the care of Drs. C. F. Johnson and Anna Larson.

"One day a man came with the following story, which he told the gate-keeper. He said: "Some time ago two men from this place were over in my part of the country selling and giving away books. I got a small book, which I began to read, and in that it told about a man who was so wise and powerful and good that if the sick people only touched his garment they got well. Now I said why should not I go and get my disease cured? (he had been nearly deaf for over twenty years). I will go to-day, and now I am here can I go in and touch the doctor's garment and be cured?" Nothing much could be done for his deafness, but the book he had read was explained to him, and others given him which, it is hoped, will lead him to trust as fully in the Great Physician for eternal healing as he seemed ready to do in the doctor for healing for his disease.

Four short itinerating trips have been made—two by Dr. Larson, one by Dr. Johnson and one by the native assistant. These aggregated twenty-

eight days (28), and the total number of cases treated were seven hundred and ninety-seven (797).

There have been sixty-seven (67) visits made to patients in their homes. These have been to people of all classes, from the poorest up to some of the wealthiest and most prominent families in the city.

While the surgical cases have been more than last year they have only been such as could be done in the dispensary and the patient go to his home at once, as we have no place for in-patients.

The dispensary has been open every day during the year (Sundays and the customary New Year's vacation excepted).

Number of cases treated at the dispensary	...	{ Men	6,516
		{ Women	3,182
		Total	9,698
Number of cases treated in the country...	...	{ Men	308
		{ Women	489
		Total	797
Number of cases visited in their homes...	...	{ Men	34
		{ Women	33
		Total	67

Grand total number of patients 10,562

Of these 6,129 were first visits and 4,433 were return visits.

This gives an average daily attendance of over thirty-three ; the largest number seen in any one day being ninety-four."

THE CHURCH MISSIONARY SOCIETY'S PIONEER MISSION IN KIEN-NING, NORTH-WEST FUHKIEN.

BY DR. JOHN RIGG.

(*From the Edinburgh Medical Missionary Society's Magazine.*)

Part I.

In the province of Fuhkien, South China, the Church Missionary Society has for the last forty years carried on a promising and developing work. For the first ten years no fruit gladdened the workers, but they were not wearied so as to lose faith, and though, through illness and death, the work was often in the hands of one solitary labourer, yet in 1876, when Messrs. Lloyd and Stewart reached Foochow, they found Mr. Wolfe superintending a network of stations, manned by native catechists, and extending north and south of Foochow for 150 to 200 miles, with 1,700 enquirers and baptised members. Since that time ten more clergymen, two medical missionaries, and

about thirty ladies, chiefly of the Zenana Missionary Society, have been added to the staff, and now there is a native Church of over 11,000 baptised and enquirers. Self-support exists to the amount of \$4,000 a year, and self-government is being developed. In the districts of Hok-chiang, Ku-cheng, and Hing-hwa, robust and growing native congregations are to be found, while in Fuh-ning, Lō-nguong, and Foochow, there are bodies of Christians slowly increasing in number, though at times they have a hard struggle to keep a footing among the multitudes of heathen who surround them.

The Methodist Episcopal Church of America, and the American Board of Missions are also at work in Fuhkien, the former having a body of converts almost equal to those of the Church Missionary Society. The American Board is less developed, their mission being smaller, and less outspread from the centre of Foochow. At Amoy are other missions, notably the English Presbyterian one, but these come little into contact with those which centre in Foochow. These may to some people appear ample forces for one province of China, but what are they among 15,000,000 of heathen, speaking at least half a-dozen dialects, differing as much as English from French?

In the north-west of Fuhkien, where the river Min gathers its waters from range upon range of hills, which rise like huge billows one behind the other, and where Fuhkien borders on the adjacent province of Kiang-si, there lies the Kien-ning prefecture, covering a tract of land of about the size of Lancashire, and containing from one-and-a-half to two millions of people. The chief city is Kien-ning Fu, which lies on a small plain, surrounded by ranges of high hills. At the city two rivers meet, one from the north and the other from the north-east. Up these rivers we may journey for from two to six days against an adverse current, and so come to the hien or district cities of Ching-ho, Kien-yang, Tsung-ngang, Pu-ching, and Sung-ki, on our way passing through wild mountainous regions, including the Bohea Hills with their fantastic outlines, and finding in addition to these cities a number of villages, some of which are really populous market towns.

Kien-ning Fu is 150 miles north-west of Foochow, and is a busy mart for a large district producing and exporting much rice, building-wood, bamboos, and fragrant mushrooms, and manufacturing large quantities of paper made from bamboos. Its population of about 200,000 is said to be composed of Kiang-si people to the extent of a third, another third consisting of immigrants from other parts of the Fuhkien province, and the remainder of natives of the Kien-ning district. The artisans and many of the shop-keepers are immigrants, the natives are the gentry, and literati, and field-workers. The city has a reputation all through Fuhkien for turbulence, independence, and dislike to strangers, especially foreigners. To these characteristics we, foreigners, are able from experience to add those of suspicion, caution, doggedness, and deter-

mination. It is said that the scum of the province finds its way to Kien-ning Fu, and that masons and carpenters, who in other places are too unskilled to make a livelihood, are able to do so and to flourish in Kien-ning Fu. To reach its people effectually three dialects have to be used, viz., the Kien-ning, the Foochow, and the Western Mandarin, while within the district, further to the north and west, the brogue of the Kien-ning dialect is so strong as to necessitate in a stranger a residence of a few weeks, before the common people can be spoken with. The women of all parts are zealous devotees of the Buddhist cult, and give largely of their time and substance to its support. Their chief aim is to accumulate merit, which in some indefinite way will avail them in the future life. Taoism also flourishes, and by the roadsides the shrines of Buddhist and Taoist idols show by their neatness and cleanliness the devotion of the people. Propitiation of demons, worship of ancestors, cultivation of the Fung-shui superstition—these represent the daily worship of the people, while the literati are proud, intolerant and tyrannical, outwardly idolators, but really self-satisfied materialists.

No Protestant Church had as yet reached the prefecture, neither had the Roman Catholic Church entered it. With the eye and heart of a Christian statesman, Mr. Wolfe sent his native catechists north, south, and west in Fuhkien, and in 1875 Mr. Ling, a convert of superior piety, who afterwards was ordained a clergyman, took up his abode in Kien-ning Fu, so being practically a missionary in a foreign country. He was a native of Kucheng, and could not speak the Kien-ning dialect. For eleven months he received all who came to him, and, in a quiet way, did what Christian work he was able. Then chronic persecution rose to a head; he and his comrades were severely beaten and otherwise cruelly treated, and compelled to leave the district. Mr. Ling never fully recovered from the shock; he ultimately became insane and committed suicide. After three more years, viz., in 1878, another attempt was made to get a foothold for preachers of the Gospel, and property was bought in the city, with the result that the vendors were seized by the magistrate and imprisoned,—one for two-and-a-half years, the other for over a year. One of them died in prison, and his son, who as a child came into the care of the Mission, is now a trained medical worker in the city which was the scene of so much sorrow to his family. The houses were wrecked, and now began a long interval with no witnesses for God in Kien-ning city or district—an interval of twelve years—broken only in 1884 by a feeble attempt lasting two weeks.

In 1888 the Church Missionary Society designated a pioneer party of three for the opening of the Kien-ning district; these were the Rev. H. C. Knox, of Balliol College, Oxford; the Rev. H. S. Phillips, of Ridley Hall, Cambridge; and Dr. John Rigg, a medical graduate of Edinburgh. A market

town, named Nang-wa, on the nearest confines of the prefecture, and fifteen English miles from Kien-ning Fu, was chosen for the temporary head-quarters, and here a tea manufactory was secured, and made to answer for hospital and residence. A native catechist of some ability was chosen to help, and four medical students were associated with the hospital work. Before the hospital was got ready, a storm of persecution almost swept away the new comers, but patience and prayer prevailed, and, soon after opening the hospital, friendliness and approval took the place of hatred and suspicion. Opium patients were received at the rate of over 100 per annum, and about 5,000 out-patients were treated annually. The in-patients, at any one time, varied from twelve or so to fifty; evangelical preaching, and itineration with the sale of books were vigorously carried on, and in 1890 it was felt that so much favour had been obtained for the Mission that a cautious attempt might be made to do direct work in Kien-ning Fu itself. After some difficulty a small cottage, or rather a hovel, was rented within a stone's throw of the city wall, and, with a supply of medicine and appliances, a medical assistant, trained by Dr. Taylor of Fuh-ning Fu, along with the catechist before mentioned, took up their residence there. So many patients came that two students had to go up to assist, but Dr. Rigg, with his family, remained in charge of Nang-wa. He, however, visited the Kien-ning Fu hospital at intervals of a month or so. The prejudices of the people were too strong, and failure would have been too serious to allow of a foreigner residing on the spot. In the first year 10,000 patients were treated, and to as many of them as possible the Gospel was preached. Twice over, serious attempts were made to dislodge the workers, but these were frustrated in answer to earnest prayer. Another year passed, in which much useful work was done both in Kien-ning Fu and in Nang-wa, and in the surrounding districts. Through ill-health, Mr. Knox was compelled to return to England, but Mr. Phillips went forward to reside and preach in the district city of Kien-yang, two days' journey beyond Kien-ning Fu. The Rev. J. S. Collins, of Trinity College, Dublin, volunteered to fill the vacancy left by Mr. Knox's withdrawal.

(To be continued.)



Medical and Surgical Progress.

REMARKS ON THE FLAP METHOD OF OPERATING.

By JOHN CHIENE, M.D., F.R.C.S., *Edin.*,
F.R.S.E., *Professor of Surgery in*
the University of Edinburgh.

When VICTOR HORSLEY, in the *British Medical Journal* of October 9th, 1886, recommended the flap method of trephining he revolutionised, in my opinion, intracranial operations. He prevented hernia cerebri; he gave us a means of safely establishing a safety valve to relieve intracranial pressure; he diminished greatly the risks of intracranial sepsis. Many patients are now alive in consequence of this simple suggestion. In October, 1892, I applied the same principle to general surgery, and have used it systematically ever since.

Now, before any operation I ask myself this question, Can I apply the flap method? In opening the abdomen, in opening joints, in dividing tendons (structures which depend for their integrity on their free mobility and non-adhesion to the skin) in tumours in which the skin is non-adherent these were amongst the first cases in which I applied the method. Week by week the range of cases is being added to, and the result has been so satisfactory that I desire to bring it under the notice of the profession.

The advantages are that the wound in the deeper parts is at a distance from the skin wound, the skin over the deeper wound is not interfered with, it supports the deeper tissues which have been divided; rapid healing takes place. The risk of infection of the deeper parts from impure skin is reduced to a minimum. The

purification of the hands and instruments is comparatively easy, the purification of the deeper layers of skin of the patient is the difficulty in aseptic surgery.

Some surgeons go the length of saying that the skin cannot be thoroughly purified. Hence the great value of this method. The flap is composed of skin and subcutaneous tissue. It should, as a rule, be crescentic, and not horseshoe-shaped. The incision should be made as far as possible from sources of septic infection. The main blood supply should enter the base of the flap. This supply, however, is of secondary importance to the first essential that the skin incision should be away from sources of septic infection.

One of the first cases on which I operated by this method was in October, 1892 for the removal of a loose internal semilunar cartilage in the knee joint. Since that time all similar cases have been operated on in the same way. In the radical cure of hernia it is a decided improvement. After the operation for strangulated hernia a truss can be applied at an earlier date. In femoral hernia a flap is turned inwards towards the middle line. In inguinal hernia a flap is turned downwards and inwards, exposing the inguinal canal. In umbilical hernia, if the skin over the hernial protrusion is of sufficient thickness, a flap is turned downwards. In incision of the knee the apex of the anterior flap is made at a lower level than the anterior tubercle of the tibia. In the elbow a flap can be turned upwards. In the operation for fractured patella and fractured olecranon this method will become the rule. In the removal of

tuberculous glands and in subcutaneous tuberculous areas Mr. STILES has applied the flap method. The value of the flap method in tuberculosis is very great, because the risk of infecting the tuberculous area by septic skin organisms is avoided.

Every surgeon knows the evil of mixed infection in these cases. If a muscle, as the sterno-mastoid in wry-neck, or the tendo achillis in club-foot, is thus exposed the muscle or tendon afterwards works smoothly under the skin. No adhesions form between the skin and deeper parts.

Recently I excised an acromion with a tumour attached to it by means of a skin flap turned up from the deltoid. I then stitched the loose end of the clavicle to the deep tissues, replacing the flap. In dislocation of the outer end of the clavicle the difficulty of keeping the bone in position is so great that the surgeon will turn up a flap, unite with buried suture the clavicle to the acromion and replace the flap.

In the division of a bone to remedy deformity or lameness, in the excision or division of bones in aggravated cases of club-foot, in exploring the gall bladder, kidney (by anterior incision) and in gastrostomy* the method will be found most valuable. If in suprapubic cystotomy the

surgeon intends to unite the bladder wound after exploring the viscus he should turn down a flap to expose the recti. In time it may come to be the case that in cases of tumours under muscles the flap will consist of muscular tissue along with the skin. In stitching the skin horsehair is used. In this connexion I may state that I have during the last year been gradually giving up knots to fix the stitches. The thread is simply passed three or four or five times, as in the first part of a common knot. Mr. JOHNSON, one of my dressers, has worked out the tension which such a method will bear. He finds that if a double horsehair is used four turns bear a strain of 35 ounces, three turns 24 ounces, two turns 12 ounces, one turn $\frac{3}{4}$ of an ounce.

It will in all probability be found that the larger the loop the greater the distance between the points of emergence—the more numerous will be the turns. In other words, all the portion of the circle which is exposed will consist of a series of turns. By this stitch the approximation of the edges is more easily attained. If on tightening the edges do not fit closely and accurately it can easily be loosened and again tightened. Lastly, to keep the flap out of the way it can be hooked back, fixing the hooks with india-rubber bands to a piece of lead. The simplest way is to stitch it back with a temporary horsehair stitch.

I am of opinion that the flap method is worthy of systematic application to general surgery. If surgeons will give it a trial I think that they will continue its use in suitable cases.

P. S.—After the paper was read I was informed by a distinguished ophthalmologist that the flap method had been used in operations of the eye for many years. It was from HORSLEY that I got the hint, and to him I give the credit. I am well aware that there is "nothing new under the sun."—(Reproduced from the *M. B. J.*)

* The method of opening the stomach first, I believe, devised by Professor ALBERT, of Vienna, was performed as follows: A flap was turned inwards towards the middle line, exposing the left rectus midway between umbilicus and ensiform cartilage. The muscle was split, the parietal peritoneum divided, the peritoneum stitched by a continuous silk suture to the anterior layer of the sheath of the muscle. The stomach was then pulled out through the wound and pushed upwards into the cellular tissue, an opening made in the skin, and the apex of the cul-de-sac drawn through the opening and attached to the skin edges.

The stomach was also stitched to the edges of the opening in the rectus. The flap was then brought back into position. In four days the stomach was opened, a tube introduced, and the patient fed.

The following remarks on counter-irritation, extracted from Dr. ARGYLL ROBERTSON'S presidential address before the Ophthalmological Society of the United Kingdom, are of practical utility, as we can attest from personal experience:—

“Another example of a somewhat discredited method of treatment is that of counter-irritation. Blisters, like leeches, can scarcely be ranked among agreeable remedies, but my experience as an oculist has convinced me of their value.

I appeal to your experience as to the effect of counter-irritation in subacute corneal inflammations and ulcerations. Have you not found its action as striking in them as the surgeon is accustomed to find it in the somewhat analogous condition of inflammation and ulceration of articular cartilages? But I think something further may be learnt from studying the effects of different methods of producing counter-irritation in corneal affections. As the result of clinical experience and observation I am inclined to believe that the efficiency of counter-irritation very much depends upon the relation of the part blistered to the inflamed organ. In other words, to produce a thorough effect the region of irritation must bear some close and definite nervous relationship to the part inflamed. We are not yet able from anatomical considerations to fix on these regions, and it is only clinical experience, or experimental investigations, that will serve as a guide. Thus I am convinced that irritation produced in the eyelids has a much more subtle influence in altering the vascular condition of an inflamed eye than an irritant application to the temporal or post-aural regions. I have often had cases that had been subjected to the application of fly blisters in the temple or behind the ear, or even had a seton introduced over the zygoma with comparatively little benefit, but where blistering of the eyelid was followed by rapid and marked improvement.

If you will bear with me I would like to describe a method of counter-irritation that has been employed in Edinburgh for at any rate above thirty years, and which is, to my mind, by far the most efficient. It consists in moistening the skin of the upper lid and then rubbing a stick of lunar caustic three or four times across the moistened surface. Within a few minutes a burning pain is experienced in the lid, the skin becomes reddened, and the lid oedematous, while the epidermis at the part to which the caustic was applied presents an ashy grey tint. The severe pain lasts from half an hour to an hour, but the surface of the lid remains tender to the touch for two or three days. The oedema speedily subsides. A black crust, consisting of the deadened epidermis tinted by the silver, forms on the surface, but is cast off in the course of six or eight days, and leaves no permanent mark behind.

I am willing to admit that some of the beneficial effect may be attributable to the rest of the eye and freedom from friction produced by the oedema of the lid, and also in part to the circumstance that the tender surface of the lid prevents the patient constantly rubbing the eye; but I am inclined to view the intimate nervous relationship between the lid and the globe as the main explanation of the great advantage that results from this form of counter-irritation.

Let general physicians and surgeons who stand in doubt as to the utility of blisters observe for a few weeks their value in eye cases, and I think they will soon have their doubts resolved.—*Trans. Ophthal. Soc. of U. K. Vol. xiv.*

SALICILIC ACID INJECTIONS IN THE
TREATMENT OF INOPERABLE CARCINOMA.
BY DR. F. X. BERNHARDT (MUNICH).

The author has obtained very satisfactory results in the treatment of inoperable carcinoma of the uterus by the injection

of salicylic acid. He experimented upon a carcinoma of the cervix with a 6 per cent solution of salicylic acid in 60 per cent of alcohol. Parenchymatous injections were made into the ulcerated mass. The effect was marked. The discharge, which had been profuse, and the pain abated after the first day. It was observed that an actual retraction took place at the place of injection. The injection was repeated on the fourth day, and the same improvement followed. This treatment was continued for two months, at the end of which time the offensive discharge and the pain had entirely ceased; the appetite improved; the temperature subsided; and the patient felt in every way much better. An ulcerating metastasis, the size of a pea, situated in the middle of the anterior vaginal wall, was twice injected. Three days after the first injection the ulceration was healed; and a second injection caused the ulceration to disappear. The primary cervical tumor became contracted, hard, and scar like. Its firm surface became covered with epithelium.

Five other such cases were treated by the same method, and the results found to be satisfactory.

The injections were done in the following manner: A BRAUN'S syringe was used, having a long needle of small calibre. Injections were made in various parts of the growth, but not more than two cubic centimetres was injected at one sitting. The injections caused more or less pain, which soon subsided.

The author thinks that this method approaches very near to actually curing the disease.—*Centralblatt für Gynäkologie*, No. 39. 1893.

MALARIAL PSEUDO-TUBERCULOSIS.

CHARLES DURA (*Journ. de Méd.*, November 10th, 1894) describes this condition as not infrequent in malarial countries. It attacks persons who for some considerable

period have been affected with ague, and begins with marked weakness, depression, loss of appetite, and emaciation. A dry hacking cough, together with dyspnoea and irregular temperature, especially towards night, supervenes. Hæmoptysis sometimes occurs. Physical examination shows evidence of apical consolidation. Examination of the sputa, however, does not show the presence of tubercle bacilli. The cases recover under the influence of quinine and arsenic, provided the cachexia be not too advanced. The explanation of this condition, which may so easily be mistaken for true tuberculosis, seems to be that a local pneumonic process is started at the apices by an accumulation of pigments in the circulating blood. (Cf. a case of malarial disease published in Vol. iii., No. 4, p. 174 of this Journal.—ED.)

STERILIZATION OF CATGUT.

B. L. EASTMAN, M.D., in a paper on this subject in the *Annals of Surgery* (Part xix., p. 56) comes to the following conclusions: "Catgut subjected to the ether-alcohol-bichloride process is unreliable as to its asepticity, and if kept long in bichloride becomes brittle and hard. Catgut in juniper oil is unreliable. Sterilization by boiling in alcohol is practised to some extent. Without considerable apparatus the method is difficult and expensive. Catgut can be rendered sterile by heating in olive oil to a temperature of 212° F. for three hours. The method is reliable, cheap and rapid. The quality is not impaired, and just so treated is more satisfactory as to strength and smoothness than if subjected to the ether-alcohol-bichloride process. A temperature higher than 212° F. is not necessary for sterilizing, and is an injury to the gut." The best method of sterilizing is to wind the gut on reels, immerse in olive oil in a wide-mouthed glass-stoppered bottle, seal and place the whole in a water-bath; cover the vessel and raise the temperature to boiling point. The heat frequently causes

the oil to become turbid and cloudy; but this clears up of itself after two or three days, and does not, in any way, impair the gut.

AFTER COURSE OF SKIN GRAFTS.

A series of researches have been carried out at the surgical clinic of Professor KRASKE in Frieberg for the purpose of throwing light upon the process of repair in the method of grafting invented by THIERSCH. "The chief conclusion of clinical value is that the positive healing of skin transplanted after the method of THIERSCH is not accomplished fully till the end of a period involving several weeks or even months, and not until this time has elapsed is the newly-implanted skin fully resistant and as capable of withstanding trauma and disturbances of nourishment as the normal skin; and, moreover, that a better vitality is assured when the skin is planted upon the normal soft parts than when granulation or scar-tissue forms bed upon which the grafting is done"—*Annals of Surgery*.

ON THE INFLUENCE OF CHLOROFORM ON THE KIDNEYS.

By DR. RINDSKOFF (BERLIN).

The writer has systematically examined the urine of 100 individuals who had been chloroformed. Only normal urine was chosen, which was examined at least twice before anæsthesia, and the last time a few hours before the operation. Both the officinal and PIOTEL's chloroform were employed. In thirty-one of ninety-three specimens which were available for examination, he found positive alterations where all other influences, except the chloroform, could be excluded. In six there was albumen alone, in six albumen and casts, in nineteen cylindroids, in twenty-one numerous leucocytes, and in nineteen epithelium of different origins. In eighty-four there were red blood-corpuscles, which were, probably, of traumatic origin. As to

the albumen, it was nearly always in mere traces which allowed of no volumetric determination. It was mostly found in the first urine passed after anæsthesia, and by the third day it had entirely disappeared. A similar cyclic, though more distinct, course was followed by the casts. They were most numerous on the morning after the operation, but they gradually disappeared, in the successive specimens, until by sixty to seventy hours after operation they had wholly disappeared. They were exclusively hyaline. The leucocytosis was the last to be noticed. Both the quantity of chloroform and the length of anæsthesia have an influence. Though the changes were only of transitory and reparable nature, yet they might be dangerous in renal affections in case of protracted anæsthesia. In order to limit its action as much as possible he advises the use of the drop-by-drop method of administration. In case of anæsthetization of one with renal disease he recommends careful examination of the urine and care in administration of the anæsthetic. He warns against chloroforming the same person on two successive days.—*Deutsche Medicinische Wochenschrift*, No. 40. 1893.

THE ABBE STRING SAW IN URETHRAL SURGERY.

By G. FRANK LYDSTON, M.D. (CHICAGO).

The author reports a recent case which demonstrates a novel field in which the ingenious invention of Dr. ABBE, of New York, may be used. The case was that of a young man who presented a traumatic stricture in the bulbo-membranous region, and hard and tortuous multiple gonorrhœal strictures in the penile urethra. Midway between the peno-scrotal and perineal scrotal angles there was a very tight contraction, through which could barely be passed a No. 1 filiform. After three weeks' fruitless attempts at preliminary dilatation, perineal section was performed. Even under anæsthesia it was impossible to introduce a bougie larger than No. 1.

After opening the urethra and dividing the deep traumatic stricture it was found impossible to introduce a urethrotome through the penile portion of the canal, even with a guide. The stricture was so hard, tortuous and cartilaginous that the attempt was given up after repeated trials. He then tied a fine silk thread to the filiform bougie in the perineum and drew the instrument out at the meatus, leaving the string in the canal. After a few seconds' sawing of the string, the pressure of the string being directed towards the roof of the canal, he drew through, by aid of the first string, a large silk ligature, and by the same sawing motion so enlarged the strictures that in a very few seconds he was enabled to pass a bougie of good size. The operation was then completed by means of the dilating urethrotome.

The author considers this method much more convenient and far safer than attempting to force the blades of the urethrotome through a narrow and tortuous canal, whether with or without a guide.—Author's Abstract in *A. of S.*

NEW TREATMENT OF HYDROCELE.

By J. NEUMANN (MUCHLHEIM, GERMANY).

The writer describes a new method of treating hydrocele which he has employed successfully in six cases. After careful disinfection a trocar is introduced into the tumour. After withdrawal of the stilette, while the fluid is escaping, the canula is pushed up still farther, covered with a slightly compressing dressing of cotton and a bandage. This is left in place for two or three days. In all of his cases adhesion took place without either inflammation or suppuration. After removal of the canula treatment is limited to local application of lead-water to the still reddened and swollen scrotal skin. The advantages of this method are its simplicity and short period of healing as contrasted with the treatment by injection, its slight painfulness and

greater assurance against consequent inflammation. Adhesion of the walls of the sac is probably due to the local influence of the canula, the alteration in pressure, and the efflux of fluid which facilitates emigration of leucocytes which, decomposing, produce a fibrinogenous ferment which causes coagulation of the serum. With the slight compression of the bandage the surplus serum flows out, and adhesion of the two serous surfaces is permitted with rigid antiseptics without inflammation.—*Wicuer Medizinische Preme.* No. 45. 1893. Abst. in *A. of S.*

EXPERIMENTAL INQUIRIES RESPECTING THE PHYSIOLOGICAL EFFECTS OF ALCOHOL.*

By J. H. KELLOGG, M.D.

Preliminary Note.

These researches relate to five lines of inquiry, as follows:—

1. The influence of alcohol upon nerve sensibility, relating specially to the tactile sense and the temperature sense.
2. The influence of alcohol upon the rate of mental action.
3. Influence of alcohol in small doses upon muscular co-ordination.
4. The influence of alcohol upon muscular strength.
5. The effects of alcohol upon digestion.

None of the questions which this inquiry has been undertaken to solve may be new, although as regards some of them I am not aware that researches have heretofore been undertaken for their solution. My purpose in undertaking the inquiry has been to obtain more exact data by the employment of methods of precision which have not heretofore been brought to bear upon the study of this question.

The first three lines of investigation, relating to the influence of alcohol upon

* Paper read at the annual meeting of the American Medical Temperance Association held at Milwaukee, Wis., in May, 1893.

sensibility, mental activity, and muscular co-ordination, have been carried on by means of an instrument known as a chronometer, a beautiful mechanism for the measurement of very small periods of time, designed by VERDIN, of Paris. This instrument measures time in hundredths of a second, and is useful in a great variety of physiological investigations.

In the study of the influence of alcohol upon muscular strength I have employed a mercurial dynamometer, in which an air-column in a closed graduated tube is used as the resistance. I spent some years in perfecting this instrument, and have now for several years employed it as a means of testing the strength of each group of muscles in the body, in connexion with the employment of muscular exercise as a therapeutic means in the treatment of various chronic disorders. From the results obtained in the examination of nearly 2,000 persons by this instrument I have constructed charts upon which the relative strength of each group of muscles in the body, when compared with each other group of muscles and with the muscles of an average man, may be graphically represented. The chart also affords an easy means of representing both the actual and the relative strength of arms, legs, trunk, or any other particular section of the body, compared with that of the whole.

The study of the effects of alcohol upon digestion has been made by means of an exact method originated nearly fifty years ago by GOLDING BIRD, an eminent English physician connected with Guy's Hospital, London, and recently perfected by HAYEM and WINTER, two eminent French physiologists. This method consists in an exact determination of the amount and condition of the chlorine found in the gastric juice by means of quantitative analyses, together with other important data. To this method I have added the methods for determining the condition of the nitrogenous and farinaceous elements of food, as re-

gards their advancement in the digestive process, which are furnished by modern physiological chemistry.

The results of these several lines of investigation may be briefly presented as follows:—

A healthy young man of eighteen years was carefully examined with reference to the length of time required for the perception of tactile sensation and the sensation of heat and cold. The average time for the recognition of tactile sensations was found to be .140 second; for the recognition of heat, .389 seconds; and for the recognition of cold, .323 seconds. The influence of alcohol upon the mental activity was tested by touching the instrument successively to different parts of the patient's body instead of to the same part, and noting the greater length of time which elapsed before the subject was able to make the signal. This method of examination prevents the patient from shortening the time by getting the basal ganglia in readiness for action with reference to a particular part of the body. The time required was found to be .158 seconds, an increase of .018 seconds. The accommodation was tested by making the subject look at a small dot on a sheet of white paper, then close his eyes and place the end of his index finger upon the dot, or as nearly to it as possible. The average distance was found to be 8.1 millimeters. The total strength, adding together the results obtained in testing each group of muscles in the body—extensors as well as flexors—was found to be equivalent to lifting 4,881 pounds. In the following table I have placed side by side the above results, and those obtained after the administration of two ounces of pure whisky:—

	Normal.	After taking 2 oz. whisky.
Tactile reaction,	.140 sec.	.303 sec.
Temperature reaction (heat)	.389 "	.796 "
" (cold)	.323 "	.750 "
Accommodation,	8.1 MM.	19.2 MM.
Strength,	4881 lbs.	
"	(2 hours after)	3,385 lbs.

The experiment was repeated in different persons and with essentially the same results in each one.

Instead of acting as a stimulant, or increasing the muscular and nervous energy of the body, as it is generally supposed to be capable of doing, alcohol actually diminishes both, and in a notable degree, as is clearly seen in the results of this experiment. It shows the actual strength to have been diminished nearly 1,500 pounds, or about one-third.

The following results were obtained in the experiments for determining the effect of alcohol upon digestion :—

The persons experimented upon were given a test breakfast consisting of 1½ oz. of dried, unfermented bread made from flour and water only, with the addition of 8 grains of salt and 8 ounces of water. Then one hour from the beginning of the meal, the contents of the stomach were evacuated by means of a stomach tube, carefully filtered, and the following facts noted :—

1. Total acidity.
2. Total chlorine.
3. The free HCl.
4. The combined chlorine.
5. The fixed chlorines.
6. The coefficient of stomach work.

Case I.—B—, a young man aged 19. The analysis of stomach fluid gave, with the usual test breakfast and without brandy, the figures shown in the following comparative table, which relate to the number of milligrams of chlorine expressed in HCl found in 100 c. c. of filtered stomach liquid :—

	Usual Test Breakfast.	Usual Test Breakfast with 4 oz. of Claret.	Usual Test Breakfast with 2 oz. of Brandy.
	grms.	grms.	grms.
Total acidity. ....	.240	.086	.016
Total chlorine.....	.328	.236	.206
Free HCl.....	.032	.000	.000
Combined chlorine	.268	.120	.034
Fixed chlorine.....	.098	.116	.172
Coefficient.....	.77	.72	.47

Peptones and propeptones were found to be notably diminished in proportion to syntonine in the stomach fluid containing brandy.

These experiments were repeated upon different persons and with alcohol in different forms, as gin, brandy, wine, etc., the quantities being made such that the same amount of alcohol, about 1 oz., should be taken in each case, and the results were found to be practically uniform and essentially the same as have been given above. Four ounces of claret caused the complete disappearance of the free HCl, diminished the combined chlorine more than fifty per cent, and also diminished the quality of the digestive work done. The test made with the two ounces of brandy shows almost a complete paralyzing of the stomach, or aepsia. The free HCl disappeared entirely, the combined chlorine, representing the useful stomach work, was reduced to .034, or one-eighth the amount done under normal conditions. This influence upon the digestion is exactly what would be expected of a drug like alcohol, that is a paralyzer of protoplasmic activity, an anæsthetic, and a sedative; and not a stimulant, as has been erroneously supposed. It should be added that each preparation of alcohol was diluted with water, so as to make exactly eight ounces of fluid in each case.

From the facts above given, it may be fairly concluded that the results of the administration of 1 oz. of alcohol internally are as follows :—

1. To diminish nerve activity.
2. To diminish cerebral activity.
3. To impair the co-ordinating power of the brain.
4. To lessen muscular strength.
5. To decrease digestive activity to a notable extent.

The only apparent exception which could be taken to the above conclusions, is in relation to the effect of alcohol upon muscular strength. The test taken 15

minutes after the administration of the alcohol showed a small increase, but a repetition of the test two hours later showed a diminution of more than 900 lbs., and ten hours later the patient's muscular strength was still 800 lbs., below his normal standard. The explanation of the apparent increase of strength immediately after taking the brandy is found in the remark made by the young man, that he felt more ready for work than he did before, and lifted with greater ease. He thought he could lift as much again, but the result of his effort fell far short of his expectations. This first effect was evidently due, not to any strength derived from the alcohol, but to the benumbing influence of alcohol upon the nerve centers, and the production of a state of mental exhilaration arising from the increased flow of blood to the brain. If any great strength would have been derived from the alcohol, it would have been more apparent two hours later, when sufficient time had elapsed for complete absorption and assimilation of the drug, rather than immediately after it had been swallowed. The notable diminution in strength which appeared within two hours after the alcohol was taken, and was still present at the end of ten hours, is most conclusive evidence that the drug possesses no value as a food, and cannot be regarded as a source of muscular energy.

One curious result which I invariably noted in the studies of the effect of alcohol upon muscular strength, is the fact that the most notable diminution in strength is always to be observed in the lower extremities.

It will be observed that these results agree with those obtained by Reichert in experiments upon the heart of the frog, and by PARKES of England in experiments upon soldiers at work. It would seem that no further evidence could be required that alcohol is a narcotic and an anaesthetic rather than a stimulant, and that its use as a supporting and tonic remedy, is a practice without foundation in either scientific theory or natural clinical experience.

I have made many more experiments relative to the effects of alcohol upon the various functions, including sphygmographic studies of the effect upon the heart and the blood pressure, the results of which I shall undertake to give, together with a more complete study of the facts mentioned in this note, in a fuller report which I hope to present in a future paper.

Professor ANASTASIUS HASS recommends the following ointment for burns, asserting that it will produce a rapid cure :—

Aristol ...	...	...	5.0—10.0
Ol. oliv.	...	...	20.0
Sol. adde	}	āā	...
Vaselin			
Lanolin			
			40.0

CANNABIS INDICA.

Dr. STEPHEN MACKENZIE says that cannabis indica is less frequently employed than it deserves. His experience has proved it to be particularly efficient as an analgesic in combating pain associated with spasmodic phenomena; it seems to exert a favourable influence in all the forms of cephalalgia, especially in violent cephalalgia occasioned by cerebral tumours. He recommends its use also especially in chronic uræmia, where the employment of morphine is believed by many to be contra-indicated. But where he has found the remedy to be well-nigh a specific, is in the more or less continuous form of cephalalgia. The type in question commences at the patient's awakening, and lasts the whole day. He generally uses it in the form of an extract, administering this at first in the dose of $\frac{1}{2}$ to 3 centigrammes (1-12th to $\frac{1}{2}$ grn.) in pills, evenings and mornings. If these doses prove insufficient, he prescribes 6 centigrammes (1 grn.) in the evening, and 3 centigrammes ($\frac{1}{2}$ grn.) in the morning.

The addition of a small amount of sugar is said to greatly increase the solubility of borax. It will also rapidly liquefy a solution of gum arabic which has become gelatinous from the presence of borax.

BALSAM OF PERU IN DIARRHŒA.

NUGGIA (*Rev. des Mal. de l'Enf. 1894*) recommends the following method of prescribing Balsam of Peru in the treatment of gastro-intestinal diseases in children. TRO-NOSEAU, PIDOUX and others have found the balsam useful in chronic intestinal catarrh, especially in diarrhœa with or without tenesmus, in dysentery, and in typhoid fever:—

Balsam of Peru	gr. 3
Alcohol	dr. i.
Syrup of lemons	dr. iv.
Water	oz. iii.

—*British Medical Journal.*

CORYZA.

HAYEN (*Therap. Leist*) recommends the following in the early stage of coryza:—

Pure carbolic acid ...	5 parts.
Liquor ammoniæ ...	5 „
Alcohol	10 „
Distilled water	10 „

A few drops are poured on blotting paper, and the vapour inhaled for a few seconds.—*British Medical Journal.*

[We take the following from the *B. M. J.*'s report of the Royal Med. and Chirurgical Society's meeting of Nov. 27, 1894. With iodoform at 21s. per lb. and sulphur at 2d. the hint is worth following up. We have, ourselves, in two cases, one of a large sloughing carbuncle in the neck, tried the suggestion with conspicuous success.—Ed.]

A YEAR'S EXPERIENCE OF THE USE OF
SULPHUR IN SURGERY.

Mr. W. ARBUTHNOT LANE, in this paper, stated that in consequence of his losing a patient by iodoform poisoning last year, he looked about for some material which, like iodoform, would act, under the influence of living tissues, by the production of powerful germicidal or inhibitory agents without possessing the poisonous elements which that drug occasionally exhibits. It occurred to him that sulphur, which when applied to cutaneous surfaces is able to destroy the organisms which cause such

diseases as acne, scabies, eczema, tinea tonsurans, &c. (probably by the formation of sulphurous acid) might also, if placed in the tissues of the living body, result in the development of a germicidal agent in a quantity sufficient to destroy, or at least influence prejudicially the growth of any organism with which it might come in contact. He first applied sulphur in Sept., 1893, and most successfully, in a case of very extensive and destructive disease of the hip-joint, when he found that it produced a powerful counter action upon the living tissues, associated with the escape of what appeared to be sulphuretted hydrogen. Since that period he had used it constantly for the treatment, not only of tuberculous disease, which to that time had resisted, too often successfully, every attempt of the surgeon, but also of disease resulting from the presence in the tissues of any form of organism. The paper was illustrated by details of cases of extensive tuberculous disease of the elbow, knee, tarsus, prostate, and spine, of acute septic spreading gangrene of the leg, of traumatic injection of the forearm, of lupus, and of carbuncle. Mr. LANE had arrived at the following conclusions as to the effect of sulphur: (1.) Neither sulphur nor the products generated by its decomposition act prejudicially upon the life or health of the individual into whose body it is introduced. (2.) If placed in contact with recently incised healthy tissues, twenty-four hours suffice to render the parts sterile as far as organisms are concerned. (3.) If the recently incised or scraped surface be but poorly supplied with blood as, for example, the brawny edge of a carbuncle or the spreading gangrene of a limb, sulphur may be left in contact with the tissues advantageously for a considerably longer period. This also applies to the granulating surface. (4.) The entry of other organisms into a tuberculous cavity does not influence the action of the drug, since it destroy all organisms, whether free in the cavity or intending into

the surrounding living tissues forming its wall. (5.) The action exerted by sulphur is a painless one.

QUERIES AND ANSWERS.

It is proposed to establish a column, under this heading, for mutual counsel and co-operation in work. We all of us have many puzzling cases, for the treatment of which we should like suggestions. Many who are too busy to write a lengthy article can find time to send a query on some difficult case. The editor invites such communications, and will endeavour to have all such queries fully answered.

OPERATION FOR THE CURE OF CANCER OF THE BREAST.

BY WILLIAM S. HALSTED, M.D.,
Professor of Surgery in Johns Hopkins
University, Baltimore.

(The following is an extract from a long and interesting paper by Dr. HALSTED which appears in the *Annals of Surgery*. New series, part xxiii. The whole paper is well worthy of a careful perusal.)

The pectoralis major muscle, entire or all except its clavicular portions, should be excised in every case of cancer of the breast, because the operator is enabled thereby to remove in one piece all of the suspected tissues.

The suspected tissues should be removed in one piece (1), lest the wound become infected by the division of tissues invaded by the disease, or of lymphatic vessels containing cancer cells, and (2) because shreds or pieces of cancerous tissues might readily be overlooked in a piecemeal extirpation.

The operation which has been attended with such surprisingly good results in our hands is performed as follows:—

(1.) The skin incision is carried at once and everywhere through the fat.

(2.) The triangular flap of skin, *a b c* (*vide* Plate I) is reflected back to its base line, *c b*. There is nothing but skin in this flap. The fat which lined it is dis-

sected back to the lower edge of the pectoralis major muscle where it is continuous with the fat of the axilla.

(3.) The costal insertions of the pectoralis major muscle are severed, and the splitting of the muscle, usually between its clavicular and costal portions, is begun, and continued to a point about opposite the scalenus tubercle on the clavicle.

(4.) At this point the clavicular portion of the pectoralis major muscle and the skin overlying it are cut through hard up to the clavicle. This cut exposes the apex of the axilla.

(5) The loose tissue under the clavicular portion (the portion usually left behind) of the pectoralis major is carefully dissected from this muscle as the latter is drawn upward by a broad, sharp retractor. This tissue is rich in lymphatics, and is sometimes infiltrated with cancer (an important fact).

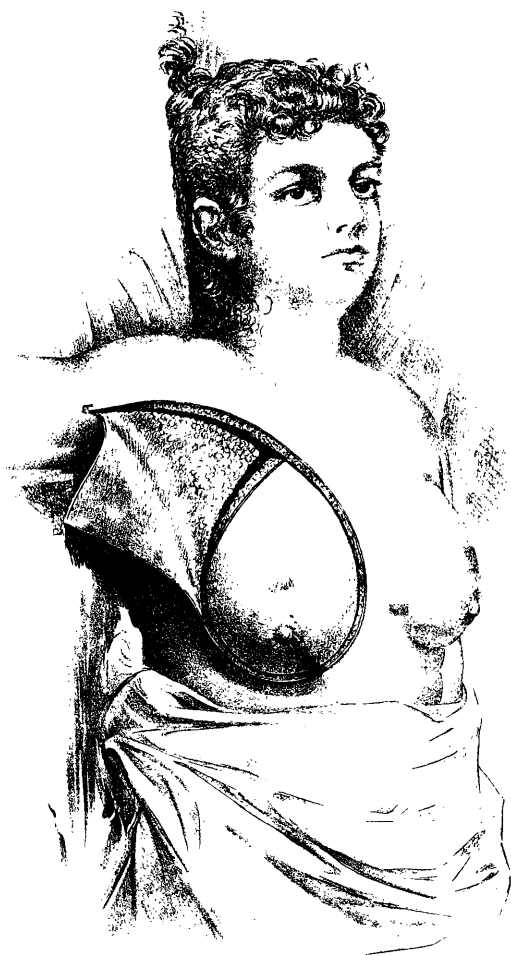
(6.) The splitting of the muscle is continued out to the humerus, and the part of the muscle to be removed is now cut through close to its humeral attachment.

(7.) The whole mass, skin, breast, areolar tissue, and fat, circumscribed by the original skin incision, is raised up with some force, to put the submuscular fascia on the stretch as it is stripped from the thorax close to the ribs and pectoralis minor muscle. It is well to include the delicate sheath of the minor muscle when this is practicable.

(8.) The lower outer border of the minor muscle having been passed and clearly exposed, this muscle is divided at right angles to its fibres, and at a point a little below its middle.

(9.) The tissue, more or less rich in lymphatics and often cancerous, over the minor muscle near its coracoid insertion is divided as far out as possible, and then reflected inward in order to liberate or prepare for the reflection upward of this part of the minor muscle.

(10.) The upper, outer portion of the minor muscle is drawn upward (*vide* Plate



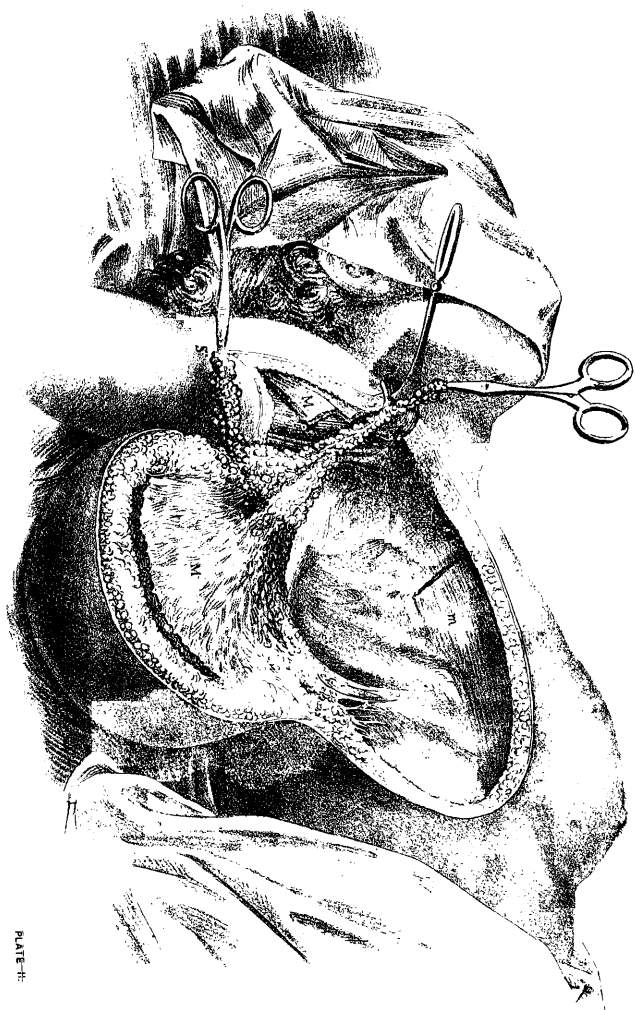


PLATE II.

II) with a broad, sharp retractor. This liberates the retractor which until now has been holding back the clavicular portion of the pectoralis major muscle.

(11.) The small blood-vessels (chiefly veins) under the minor muscle near its insertion must be separated from the muscle with the greatest care. These are embedded in loose connective tissue which seems to be rich in lymphatics, and contains more or less fat. This fat is often infiltrated with cancer. These blood-vessels should be dissected out very clean, and immediately ligated close to the axillary vein. The ligation of these very delicate vessels should not be postponed, for the clamps occluding them might of their own weight drop off or accidentally be pulled off; or the vessels themselves might be torn away by the clamps. Furthermore, the clamps, so many of them, if left on the veins, would be in the way of the operator.

(12.) Having exposed the subclavian vein at the highest possible subclavicular point, the contents of the axilla are dissected away with scrupulous care, also with the sharpest possible knife. The glands and fat should not be pulled out with the fingers, as advised, I am sorry to say, in modern text-books and as practised very often by operators. The axillary vein should be stripped absolutely clean. Not a particle of extraneous tissue should be included in the ligatures which are applied to the branches sometimes very minute, of the axillary vessels. In liberating the vein from the tissues to be removed it is best to push the vein away from the tissues rather than, holding the vein, to push the tissues away from it. It may not always be necessary to expose the artery, but I think that it is well to do this. For sometimes, not usually, the issue above the large vessels is infiltrated; and we should not trust our eyes and fingers to decide this point. It is best to err on the safe side and to remove in all cases the loose tissue above the vessels and about the axillary plexus of nerves.

(13.) Having cleaned the vessels we may proceed more rapidly to strip the axillary contents from the inner wall of the axilla—the lateral wall of the thorax. We must grasp the mass to be removed firmly with the left hand, and pull it outward and slightly upward with sufficient force to put on the stretch the delicate fascia which still binds it to the chest. This fascia is cut away close to the ribs and serratus magnus muscle.

(14.) When we have reached the junction of the posterior and lateral walls of the axilla, or a little sooner, an assistant takes hold of the triangular flap of skin and draws it outward, to assist in spreading out the tissues which lie on the subscapularis, teres major, and latissimus dorsi muscles. The operator having taken a different hold of the tumor, cleans from within outward the posterior wall of the axilla. Proceeding in this way we make easy and bloodless a part of the operation which used to be troublesome and bloody. The subscapular vessels become nicely exposed and caught before they are divided. The subscapular nerves may or may not be removed at the discretion of the operator. KÜSTER lays great stress upon the importance of these nerves for the subsequent usefulness of the arm. We have not as yet decided this point to our entire satisfaction, but I think that they may often be spared to the patient with safety.

(15.) Having passed these nerves the operator has only to turn the mass back in its normal position, and to sever its connection with the body of the patient by a stroke of the knife from *b* to *c*, repeating the first cut through the skin.

The operation, as we perform it, is literally an almost bloodless one. From the first to the last each bleeding point is stopped with an artery forceps as quickly as possible. When practicable the vessels are clamped before they are divided. If no blood is lost there is no perceptible shock from the operation. This is true of almost every opera-

tion. The symptoms which are so often ascribed to shock are due almost invariably to loss of blood. I have performed this operation for breast cancer on patients whose pulse before the operation was so feeble that the anæsthetizer and by-standers have pronounced it barely perceptible. As a rule, the pulse is little, if any, feebler after the operation than it was before it.

The edges of the wound are approximated

by a buried purse-string suture of strong silk. Of the triangular flap of skin (*a b c*) only the base is included in this suture. The rest of this flap is used as a lining for the fornix of the axilla. The apex of this flap is consequently shifted to a new and lower position. The axilla is never drained, and invariably heals by first intention. The uncovered wound often heals by the so called organization of the blood-clot.



Correspondence.

CHRIST HOSPITAL,

March 12th, 1895.

DEAR DR. HODGE.

I had a very profitable and enjoyable time at home. From the latter part of June till the first of October I spent most of the time in Chicago. I took a course in the "Post Graduate" on gynecology and attended Senn's clinic at Rush. He is a great surgeon and good lecturer, and has a splendid run of operations. I saw MARTIN, DUDLEY, BYFORD and other Chicago operators do work not to be surpassed in any other city of the United States. I saw such men as PRICE, EASTMAN of Indianapolis and others who were visiting Chicago.

Of course the great thing was the World's Fair, and the White City was glorious to behold—like a fairy city. Medicine and surgery were well represented in excellently equipped hospitals, and the drug and instrument exhibits were complete in every way. Merck had a beautiful display of drugs and preparations.

Electric apparatus of the choicest patterns were seen in the electric building. My heart almost sank, for though excellent it will be a long time before this best equipment can be found in mission hospitals. A fine exhibit was to be seen in the agricultural building, showing the composition of various food stuffs. Large glass tubes held the original substance, and then other tubes held the various ingredients, and the height in the tube showed the amount of each constituent. For instance milk was held in one tube, the tube being full, next the water partly filling the second tube, then the caseine in another tube, the cream in the bottom of another and the salts in small bulk at the bottom of another. There were such tubes with bread, meat and other

articles of food, both for men and animals, and as the tubes were of the same size one could see at a glance the quantitative analysis of various foods. In September I attended various congresses as the Labor Congresses, Catholic Congresses and the "Single Tax" Congresses. I became a zealous believer in the last idea, which is HENRY GEORGE's plan of taking ground rent for taxes and taking all tax off what men do.

I attended the great Parliament of Religions, and though the enemy may take some advantage of our liberality, and though the Buddhist representatives may have somewhat strengthened theosophy and unitarianism and universalism, yet to those who think it was a good thing to bring all religions together to present their various views.

The winter I spent in New York, reviewed my anatomy by dissecting at the college of physicians and surgeons, had a talk in their pathological laboratory and did some pathology and bacteriology. I visited most of the clinics of the city. There are some wonderful operating rooms costing up in the hundreds of thousands, marble lined with tile floors. The Syms room at the Roosevelt, the Crane operating room at Bellevue and the operating room at the Presbyterian Hospital are a picture to the medical man, and yet antisepsis or asepsis are simpler now than ten years ago.

Mr. BURNEY leads the way as an operator, but he has many who fall very little behind him. I cannot tell you all I saw in New York; and I visited clinics in Boston, Philadelphia, Baltimore, Washington and other places. These cities are full of grand operators, and it is a treat to see their work.

Yours sincerely,

W. E. MACKLIN.

FOOCHOW,
March, 1895.

DR. SYDNEY R. HODGE,

Editor, Medical Missionary Journal.

DEAR DOCTOR,

As there are many kinds of medical societies in these days the missionary doctors in Foochow have thought it a good plan to establish a medical prayer meeting to meet monthly at the physician's residence nearest the place where the monthly concert of prayer is to be held on the same afternoon.

The first meeting was held at the hospital home of the American Board, Foochow city. Drs. LYON, MASTERS, WHITNEY, NIEBERG and WOODHULL were present. Eph. vi. 10-18 was read, special requests for prayer made, and very earnest prayers were offered that we might have the help of the Spirit to keep our spiritual weapons bright and have constant help in the work of healing, of training students, and in planning for the best methods of evangelistic work in hospitals, dispensaries, etc.

The reasons given for a special prayer meeting for physicians were two :—

1. Our work is so absorbing that we have greater need to "watch and pray."

2. The enemy has a deeper hatred towards the medical work, because he knows it is his worst foe. So he is more willing in his efforts to hinder and spoil the spiritual life of physicians.

After the meeting as there was still a little time before the concert of prayer, we went over the hospital. It has recently been repainted, and the drug-room fitted up with uniform bottles, giving to the premises a cheerful appearance. New paint and fresh whitewash will not heal disease, but

it makes a good impression on the heathen if the hospital has a thrifty appearance.

One case of interest seen was a young girl who has had an operation for dead bone. About four inches of the tibia was removed, and a large quantity of *débris*.

There was great loss of blood, and the patient was very weak for several days, but is doing well now, the large cavity filling up nicely. A peculiarity of the case was that the necrosed portion was a very clean white color, and there was entire absence of offensive odor. The leg was soaked in very hot water half an hour daily for several weeks before the operation.

Truly yours,

KATE C. WOODHULL.

The following extract from a private brief note from Dr. PARROTT, will be read with interest. We rejoice at the press of work and its success, and humbly crave the occasional privilege of further rejoicing with them that do rejoice :—

LAO-HO-KÓU *via* HANKOW,

March 5th, 1895.

"I wish I could send you some items of interest, but much press of work makes it almost impossible.

The work is steadily progressing, and men are constantly coming from distant cities and towns. Yesterday the private secretary of one of the big mandarins of the strongly anti-foreign city of Nan-yang Fu in Honan sent a messenger for help. I go part way to meet the man next week, the place we meet coming within the range of a little journey I had previously arranged. A journey of only 4 days however."

Queries and Answers.

It is our intention to offer, under this heading, to all needing advice on any particular case an opportunity of briefly stating their difficulties. Many who are too busy to write long articles may be glad of asking a few questions on diagnosis and treatment of particular cases, or questions on general mission policy as far as relates to the medical aspect of it. Those of us who are more experienced will thus be brought in touch with those who are younger and enable us more adequately to bear one another's burdens. The editor trusts that members will avail themselves to the full of the advantages of this column, and he will endeavour, on his part, to see that every query receives an answer from the quarter, or quarters, most competent to give it.

Query No. 1.—That useful work by Dr. F. PORTER SMITH, of Hankow, entitled "Contributions towards the Materia Medica and Natural History of China for the use of Medical Missionaries and Native Medical Students", published in 1871, has been for some time out of print. Medical missionaries in the interior have doubtless

derived considerable advantage from having such a large and carefully prepared English work of reference ready at hand. It is true that a few errors may be found in its pages, but as the first attempt of the kind, and as the result of several years of hard work in compiling from various sources, and in actual examination of many of the native drugs, it has doubtless proved a valuable book in the hands of new comers as well as of those that have been longer on the field. A revised edition, embracing all new discoveries and investigations as to the nature and use of native drugs, &c., is greatly needed and called for. Probably the Mission Press at Shanghai would be only too glad to reprint the work on its own responsibility; for it would naturally find a ready sale, and pay its own expenses. Has any one made a series or collection of notes that would serve to strengthen and enrich such a new edition? Or will any one who has worked on this line undertake the entire task of revision? Or will any one undertake a section or portion of it?

J. F.



Notes and Items.

"If there be good in that I wrought,
Thy hand compelled it, Master, Thine;
Where I have failed to meet Thy thought,
I know, through thee, the blame is mine.

One instant's toil to Thee denied,
Stands all eternity's offence,
Oft what I did with Thee to guide,
To Thee, through Thee, be excellence.

Take not that vision from my ken,
O whatso'er may spoil or speed—
Help me to need no aid from men,
That I may help such men as need."

RUDYARD KIPLING.

Against Hurry.

"Faith and Hurry are mutually incompatible. The one must finally banish the other from the soul . . . the inward life itself cannot be pressed or hastened. Man's deepest virtues are rooted in the dark, and spring up secretly after many days and nights; he knoweth not how. The heart has its times and seasons: and the best fruits of the spirit only ripen slowly and come to perfection unaware."

Dr. ROBERTSON NICOLL.

"Dark skies must clear, and when the
clouds are past,
One golden day redeems a weary year;
Patient I listen, sure that sweet at last—
Will sound His voice of cheer."

UNKNOWN.

"This little life is flesh and bone.
With meagre portions of white sleep,
And all the world is but a scheme,
Of busy children in the street."

A book of Lyrics by BLISS CARMEN.

Forgiveness.

"Forgiveness is not a change in our minds towards God, but a change in God's mind towards us."

Dr. DALE.

"It is one thing for God to be at peace with us, and quite a different thing for us to be at peace with ourselves."

DITTO.

Judson's Three-fold Cord.

1. Secret Prayer.
2. Self-Denial.
3. Doing Good.

Selections from Judson's Advice to Missionaries.

1. Come out for life.
2. Many die, walk softly: death is narrowly watching your steps.
3. Beware of the reaction which will take place soon after reaching the field.
4. Beware of the greater reaction which will take place after you have acquired the language and become fatigued and worn out with preaching the Gospel to a disobedient and gainsaying people.
5. Beware of that pride which is apt to grow out of the consciousness that we are esteemed by the great and good.
6. Beware of the indolence which leads to a neglect of bodily exercise.
7. Beware of genteel loving.

We extract the following from the *Edinburgh Medical Missionary Society's Magazine* :—

OUR OWN WORK ABROAD.

Nazareth.

Dr. VARTAN, whom we hope to welcome home on furlough in the spring, writes as follows:—

"A Moslem child was brought from a distant village to the dispensary who was suffering from chronic bronchitis. There was a cervical vertebra of a wolf hanging

on the breast of the child. The poor little creature was made to continue in her sufferings for weeks through the faith of the parents in that bone. Fortunately, before it was too late, the little sufferer was brought to the Mission. And through blessing on the means employed here, the child was speedily cured. This gave a suitable opportunity to shake off the superstitious faith of the parents from such worthless methods and thereby they were warned to forsake similar worthless means regarding the welfare of their souls, and to take hold of the good Physician, who alone is able to give life and health to their poor souls. Their grateful feelings, and the rejection of the sacred bone were such, as to lead me to believe that they were seriously impressed by what was said to them.

"Frequent opportunities are offered in the dispensary to converse with Moslems on religious subjects, more especially on the divinity, death, and resurrection of Christ. And many Moslems are enlightened on the subject, and not a few of them are brought to think that Christianity is a divine religion. The following is an instance out of many:—A respectable sheik was in the dispensary some time ago, and at the close of the preliminary service, he remarked to the catechist, that he liked the address very much, for it was very good. Only he was sorry that Christ was presented as God. This of course opened a discussion between him and the catechist. The latter pointed out to him statements, not only out of the Bible but also from the Koran, which would establish the divinity, death, and resurrection of Christ. The sheik was rather ashamed of his ignorance of the existence of such passages in the Koran, or at least for his not having seen their force before, as he has done now. I believe he left the dispensary with leanings towards Christianity.

"The people are generally regardless of God's name in their conversation, more especially the Moslems. In one moment

they may swear a dozen times, no matter whether they are speaking the truth or falsehood, or whether they are talking seriously or in jest. The word 'wallah' (by God) is uttered without the least thought about it. They are of course always, when noticed, reminded of the unlawfulness of the liberty they take, and in many instances, I am glad to say, without any offence. I was prescribing for a Moslem lady some days ago in her house, and a friend of hers in the room was relating some incidents, and as usual she was uttering freely God's name, without the least necessity, in almost every two or three sentences. I asked her if she knew what was the meaning of expressing God's name in the way she was doing. She did not know. And when she understood that it meant calling God to be witness for what she was telling (and she was not telling any truth), she was very sorry, and thanked me for enlightening her on the subject, and at the same time she lamented the ignorance and carelessness of her religious teachers.

"A common mistake is the seeking, by the poor ignorant people, help from devishes in cases of nervous ailments. These impostors teach that such ailments are the effect of the displeasure of the genii, and that they have the means of pacifying these invisible beings. A young lad in a distant village, who had been lying forty-eight hours quite unconscious and insensible, was being exorcised by several of these unholy men in succession, without any improvement, of course, in his state. The poor creature would have been another victim to the mummeries of these men, if it were allowed a little longer, but fortunately some member of the family had sent for me. The case was diagnosed sunstroke, both from the existing signs and by the history, and I am glad to be able to say that the means I employed, through the blessing of God, brought consciousness in about six hours, and the patient sat and asked for

food, &c., before another six hours expired. And the immediate result was that these modern prophets of Baal were crestfallen, and the Lord Jesus was exalted, for the relatives began to sing, the Lord Jesus, He is God; the Lord Jesus, He is God.

"Let me close this by telling you briefly the conduct of two women on their death-bed. The one belonged to the Greek community, and was buried in their cemetery. But her only support was Jesus in lingering illness. She was often left alone in her bare little room, but she felt the presence of Jesus was with her. She often was in want, but at such times she consoled herself by thinking of Him who became poor for her, though He was rich. Often she was in pain, but she made light of her sufferings by remembering those of Jesus. And when she was dying she was very glad that she was soon going to be with Him. For some hours before she died she was unconscious, but the sound of Jesus would make her move her eyes towards the sound as if to say she was not afraid crossing the river for He was supporting her.

"The other was a Moslem, and was likewise buried by her co-religionists. But she died almost, if not a Christian. She loved Jesus in her sickness, because she was assured that He had loved her before with a most tender love, and that He would take her into His everlasting glory, if she only accepted or believed in the offer. She would ask my catechist to read about the trial, death, and resurrection of Jesus, and she would shed tears of penitence and joy during the reading. Frequently muttering the name of Jesus, peacefully she passed away.

"These are a few instances out of many similar ones frequently happening, and I trust the Lord will more abundantly bless our humble instrumentality, as well as all similar instrumentalities throughout the world, and thereby hasten the coming of His Kingdom on earth."

DR. WENYON'S IMPRISONMENT.

The following letter from Dr. WENYON, from the *Methodist Recorder*, will be of interest to our readers:—

SEVEREK, MESOPOTAMIA,

Nov. 19, 1894.

MY DEAR —

I expected to have been far beyond the Turkish empire by this time, but have been seriously delayed by unexpected difficulties.

On Saturday, November 3, I crossed the Euphrates and entered the town of Biredjik. Rev. C. S. SANDERS was with me, a missionary of the American Board, long resident in Central Turkey, whose missionary duties occasionally bring him to this neighbourhood. We had selected our lodgings, and were anticipating the refreshment of a quiet Sabbath's rest after a hard week's riding, when one of the Turkish officials came in to see who we were. Mr. SANDERS was known to some of the people in the town, but I was, of course, a perfect stranger. The official said that I must go with him to the governor of the town. Mr. SANDERS went with me. The governor was sitting on his mat on the floor smoking his nargila, and if he had been the Sultan himself he could not have received us more haughtily. "Where do you come from?" he asked me, "and where are you going?" "I have come from London," I said, "and am going through to the Persian Gulf." I produced my passport and other papers in proof of what I said, but the obstinate old Turk tossed them from him with disdain and said, "I don't believe a word you say—you must go to prison."

I was once arrested by the Russians when crossing their frontier, and detained for several days, but they did not send me to prison, and treated me perhaps as politely as they could under the circumstances. The Turks put less restraint upon their despotism.

There was no charge whatever against me, true or false. The governor bitterly hated the English, because of their supposed sympathy with the persecuted Armenians, and having now an Englishman in his hands he had an opportunity of giving practical expression to that hatred. I learned afterwards at Aleppo that he informed the high officials there that I might be an Armenian revolutionist, for as nothing whatever was known about me all things were possible in the way of discovery, and I might prove to be an Armenian revolutionist or anything. I am told he still believes that if he could have kept me in prison a few months, or years, he would have been able to discover something against me.

I protested against being sent to prison in this way, but in vain. Mr. SANDERS offered bail for me, but it was not accepted, and so to prison I had to go.

Turkish prisons, even in the capital, are not models, but they are palaces compared with the vile holes which serve for prisons in remote interior towns like Biredjik. There were four large cells, opening by large iron-barred doors and windows on to two small yards. Capital offenders, brigands, murderers, all were confined in the cells, being allowed to walk about the yard only during certain hours in the day. The less heroic type of prisoners—swindlers, debtors, &c.—were kept night and day in the prison yard.

There were about a hundred prisoners in this jail, a large proportion of them being notorious criminals who were to be sent on to the large metropolitan prison at Aleppo. A strange company we were—Kurds, Circassians, Turcomans, most of them robbers, and not a few convicted murderers as well. One important robber chief was there who had at different times killed eleven soldiers who had attempted to arrest him. On the day after my arrival a band of seventeen desperate looking villains were brought in heavily manacled. They had been ringleaders in the terrible massacre of

Christians at Moosh, not less than six thousand having been brutally murdered in one night. Our Moslem guards felt more than half inclined to apologise to these slayers of "the Christian dogs" for their imprisonment. They told them that they had not been arrested by the will of the Sultan, but at the request of the Queen of England, and these grim ruffians felt perhaps a sort of sullen satisfaction at finding that a subject of the monarch who had suggested their arrest was a fellow-prisoner with them.

Mr. SANDERS did his very best to help me, and even offered to stay in the prison with me, but this, of course, I could not allow. He sent blankets for me at night, and as I had no bed, no board even, or boarded floor, I spread the blankets on the bare earth and stones. Sleep, however, was impossible, except for a few moments at a time. The prisoners did their best to make the night a time of revelry. One man, a notorious murderer, stood at the window of his cell and crowed like a cock at the moon. The others simultaneously, each in his own language, yelled and screamed and shouted their various robber calls. Once they fought like wild beasts, and the poor soldiers left on guard at night dared not go in to stop them. This uproar continued far on into the night, but usually by about one o'clock in the morning my fellow-prisoners were exhausted and went to sleep. Then all was still, but by that time the vermin, with which the dust in which I had spread my blankets teemed, had got full possession of me, and I was kept occupied till morning.

Mr. SANDERS sent my meals to the prison, but the circumstances of that miserable dungeon were no more conducive to appetite than sleep. There was a foul smelling open drain in the middle of the yard, one man was lying sick with what appeared to me to be typhoid fever, others were shivering with ague, and I only wondered how any one could possibly live there and be well.

Had not Mr. SANDERS been with me I might have been kept in that prison for an indefinite period, for I was arrested so suddenly that I could not have communicated with either friends or Consuls. Mr. SANDERS set the wires at work for me, and as telegrams of inquiry from the high officials began to come to the governor respecting me, he thought it would be safer to send me on to the capital. Accordingly, on the morning of the fourth day I was suddenly informed that I was to be sent on as a prisoner to Aleppo, and must start at once. I rode on horseback between two mounted guards. One of these was a Plevna veteran, who wore a medal on his breast, and had upon his head and face other marks more impressive, if less ornamental, of the conflicts in which he had engaged.

We rested at night in one of the miserable khans of the neighbourhood—camels, donkeys, horses, cattle, sheep, and human beings all finding shelter beneath the same roof. On the morning of the third day we reached Aleppo, and I was taken to the courtyard of the Viceroy. A few moments later the great man himself drove in, and shortly afterwards he sent for me to his room. At once he said, "You have been brought to Aleppo as a prisoner, but your arrest has been a mistake; there is no charge against you, and I set you free."

The next morning I started again, by the way I had come, back to the Euphrates and Biredjik, but I soon found that my imprisonment had done me more mischief than I thought. A few hours out from Aleppo a violent fever developed, and as I could not sit in the saddle, and as there was no shelter whatever within ten miles—nothing but bare brown desert as far as the eye could reach on every side—I had to spread my rug and lie down upon the sand and stones. Riding and resting by turns, I managed about two hours after sunset to reach a khan, where I found shelter for the night.

Some days later I again crossed the

Euphrates, and entered the town of Biredjik. The officials did not attempt again to molest me, but the effects of their previous treatment of me remained, and for two days I was confined to my bed with a temperature of over 104 degrees.

The people have everywhere been most respectful to me. Whenever I enter a town or village the announcement that a hakim (doctor) has arrived brings me lots of patients. Even when lying helpless with fever at Biredjik women would persist in bringing their sick children to my bedside for medicine.

I am now hundreds of miles away from the place of my imprisonment, and right in the heart of Mesopotamia. My fever has gone, but it has left me limp and weak.

The delay occasioned by the illegal action of the Turkish officials will not be less than three weeks, but I am now, as fast as my strength will allow, pushing on towards the Tigris, which I hope to reach in about nine days. There are no boats on the upper reaches of that river, but there are rafts, and on one of these I expect for twenty days or more to drift with the current through the lovely Arab country to Baghdad. Thence I shall be able to go by steamer direct to the Persian Gulf.—With kind regards, I remain, yours very truly,

CHARLES WENYON.

BIRTH.

At Chungking, 5th Feb., the wife of C. J. DAVENPORT, F.R.C.S., London Mission, of a daughter.

DEATH.

At Canton, on Feb. 28th, 1895, Mrs. HAGER, wife of Rev. C. R. HAGER, M.D., of the A. B. C. F. M., Canton.

ARRIVALS.

At Shanghai, Jan. 4th, J. R. WILKINSON, M.D., wife and three children, for Southern Presbyterian Mission, Soochow.

At Shanghai, Jan. 31st, JULIA M. DONAHUE, M.D., for M. E. M., Foochow.

At Shanghai, 15th March, Dr. and Mrs. BENNETT, for L. M. S.

At Shanghai, 23rd March, Dr. MALCOLM (returned), for Can. Presbyterian Mission, Honan.

DEPARTURES.

From Hongkong, Jan. 20th, J. A. OTTE, M.D., wife and four children, of the

American Reformed Mission, Amoy, for U. S. A. (Grand Rapids, Mich.)

From Shanghai, on 23rd Feb., Dr. and Mrs. PARRY and five children; and two sons of Dr. MAIN, for England.

From Shanghai, 9th March, Dr. MARIE HASLEP, Am. Epis. Mission, for U. S. A.

From Shanghai, 11th March, Dr. PRUEN and child, of C. I. M., for England.

OFFICIAL NOTICES.

The following gentlemen have been duly elected members of the Association:—Francis E. Nieberg, M.D., Univ. of Michigan, of the A. B. C. F. M. Mission in Foochow, and W. F. Seymour, M.D.; also Dr. Chas. A. Oliver, of Philadelphia, to the honorary membership.

The following officers have been elected:—

Vice-President, North China Division:—S. S. McFarlane, L.R.C.P. and S.E.

„ Shanghai Division:—Percy Mathews, M.D., F.R.C.S.

„ Canton and South China Division:—Chas. Wenyon M.D., M. Ch.

Censors:—W. Wilson, M.B., C.M., L. H. Hoag, M.D., G. A. Stuart, M.D., K. C. Woodhull, M.D.

H. W. Boone, M.D., E. Reifsnyder, M.D. and J. Frazer Smith, M.D., who were respectively elected to the posts of Secretary and Treasurer have resigned, and votes are now called to fill up these two offices.

SYDNEY R. HODGE, M.R.C.S., L.R.C.P., (ENG.)

(*Sec. pro. int.*).

NOTICE.

The Editor is anxious to make a full and useful index of all the back volumes of the Magazine. As such a work can only be undertaken by mutual co-operation, being too tedious for any one busy man, he invites all who are willing to share in the task to communicate with him at once.

The China Medical Missionary Journal.

VOL. IX.

JUNE, 1895.

No. 2.

Original Communications.

[No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editor on the first day of the month preceding that in which they are expected to appear. A complimentary edition of a dozen reprints of his article will be furnished each contributor. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.]

DO THE NINETEENTH CENTURY MEDICAL MISSIONS FULFIL THE NEW TESTAMENT IDEAL?

BY REV. DAVID HILL.

In comparing the medical missions of the present day with the New Testament ideals, so often quoted as their basis and pattern, one cannot but be struck with the different plane on which they respectively move. The difference indeed is so wide both as regards method and result that in some aspects we seem to see more of diversity than affinity between them.

The works of healing, both of our Lord and of His apostles, dispensed almost entirely with the aid of means and the help of time. Except in a very few instances He simply sent His word and healed them. The apostles worked largely on the same lines. The consequence was that medical ability and surgical skill were thrown into the shade, were probably never once thought of, whilst the marvellous Healer Himself came prominently to the front, and the interpretation generally put upon these acts was that they were manifestations of Divine power. Fear, wonder, amazement, fell upon the people, and they glorified the God of Israel. On more than one occasion what we should call conversion resulted from them; a nobleman whose child had been healed believed, and his whole house; a beggar also on another occasion at once followed Him in the way.

Similar results ensued in the case of the apostles' healing of the sick. They are sent forth, in the first instance, a few poor fishermen, with no more knowledge of medicine than they have of the laws of gravitation, yet they are told to go and heal all manner of disease and all manner of sickness, and to say as they go, "The kingdom of heaven is at hand." They have manifestly nothing to rely on except the word of command, the assured authority of their Master; and yet from all we can gather from the records handed down to us, in the matter of healing disease, there is no sign of failure, and but once an inability to cast out a devil.

After the Lord had ascended to heaven, though no further commission as to healing the sick had been given, there is no cessation in the exercise of this power, and in the very first case on record the people were so filled with wonder and amazement that they were evidently inclined to honour the apostles as they previously had honoured the Lord Himself; a result which Peter immediately resented, stoutly protesting against the honour being rendered to them, as though by *their* power or godliness they had made the lame man to walk. So too, Barnabas and Paul, when the Lycaonians were about to offer divine honours to them for the healing of a cripple, rent their garments and sprang forth among the multitude, crying out, "Sirs, why do ye these things? we also are men of like passions with you." With a marked consistency they turned the attention of the people from themselves to the Great Healer, whose instruments they were content, nay proud, to be.

And this was the very object intended by these acts of healing. They were meant to be a Revelation, and they fulfilled their purpose. And to what did that Revelation amount? Did it tell of a skilful practitioner, whose diagnosis and treatment of disease demonstrated the superiority of his medical training, or of a surgical ability which dazzled on-lookers and eclipsed all they had seen or known before? Nothing of the sort; these things were never thought of. The Revelation was of a Person and a Kingdom far other and far higher than those ruled by the laws of nature, where effect follows cause in an orderly succession, determined from within the scheme of nature itself, the links of which succession may be traced one by one till the chain is complete. The Revelation was of a kingdom, not of this world, a kingdom of heaven, a kingdom of God, in which temporal limitations are unknown, and where material laws are subordinate and subservient to the higher laws of a spiritual realm.

The Person too was not that of some skillful professor of one of the noted schools of medicine of the day, abreast of its most advanced teaching and aware of its most recent discoveries. He was the Revelation of God. The kingdom was Divine, and the Person not less so. The kingdom was indeed His own; His wisdom had framed its laws, His hand held its forces. He was the one great Emperor, at whose fiat diseases came or fled. True these works of power told of a tenderness more humane, a compassion more pitiful, than ever the world had seen or known, but their meaning reached further than that. To humble, honest hearts it said in language they could not mistake, "The kingdom of God is come nigh unto you," and they themselves bore witness, "We beheld his glory; glory as of the only begotten from the Father, full of grace and truth." By them the meaning was grasped, to them the kingdom of heaven had come down, and to its King they bowed in loyal and whole-hearted allegiance. Thenceforward there was to them a new

creation, all things had become new ; the whole movement was lifted up from the plane of natural law to that of immediate contact with the Divine ; a new world was opened, the kingdom of God was with men, and in these acts of healing they were led to see God acting from without, directly and immediately and independently of the intervening links of orderly succession in the chain of cause and effect. No ordinary diagnosis of disease, no skilful application of remedies, no patient oversight for days or months ; He *spake*, and it was done, He commanded, and it stood fast : the voice was the voice of a God, and not of a man. The Word had become flesh, and now dwelt among men. And as it was in the days of Christ and His apostles, so it continued to be in later times when the gifts of healing were bestowed upon the Church ; they also were as avowedly divine in origin, operation and intent, as those entrusted to the apostles themselves. All these wrought the one and the same Spirit, testifying alike that it is the same God who was working all in all ; and as in the case of the gift of prophesying, so in these cases of healing also, the result doubtless was, that men would fall down on their face and worship, declaring that God is in you of a truth, so that all through the apostolic age there was a distinct demonstration of Divinity, an unhesitating attestation that the work of healing was the work of God.

Now let us span the eighteen Christian centuries, and from this unveiling of the heavenly kingdom with its majestic powers, its resistless forces, its unworldly bearings, as seen in the new creative energy of these New Testament healings of disease, let us turn to the medical mission work of the present day, the offspring and direct descendant of those N. T. works of Divine power and mercy, and let us inquire what have we corresponding to, or supplying the place of, these overwhelming attestations of Divinity ?

First then, we are confronted with the fact that the bodily presence of the Great Healer Himself is still withdrawn, and the lapse of eighteen centuries appears at the very outset, though only to outward seeming, to be a great disadvantage : then the gifts of healing, such as those exercised in the apostolic age, if indeed still bestowed, are exceedingly rare ; and further, the final command of the risen Lord has so centred the thought of the Church on the discipling of the nations and the preaching of the Gospel to every creature, that the healing of bodily affliction has largely retired into a subordinate place, though it is still appealed to as a divinely instituted agency, which, as we have seen, derives all, or almost all, its meaning from its Divine bearings,—its relation to and revelation of God.

But how different is the impression made by the medical missions of to-day from that of the healing of the sick in New Testament times !

In the place of illiterate fishermen we have cultured and qualified medical practitioners ; instead of homeless and penniless evangelists we have

resident doctors and noble edifices ; in the place of the utterance of one life-giving word we have the employment of the most potent medicines known, and the use of the most perfect instruments that can be had, and the long and patient ministry of kind and able men. Variations so wide cannot but produce a widely different impression. And if we may judge by the evidence of the tablets and scrolls which adorn our hospitals, and which tell of the surgeon's skill or the doctor's ability, as much as, or more than, of the power of God and the blessing of heaven, we should conclude that the first impression is that of the vast superiority of Western ability, learning and skill, and the second that of foreign kindness and Christian charity, and the third that of the dazzling abundance of Western wealth.

But on every count the impression is that of a human, rather than a Divine, agency. The witness borne is to man rather than to God. The thought of man spontaneously comes to the front, whilst that of God falls into the back ground. The entire plane on which the healing moves has been changed. In the New Testament man was nothing, God was all in all. In the work of the present day man is to the front, and God too often a secondary consideration. In all this we cannot but recognize how it falls in with a prevalent, though subtle, tendency of the times. I refer to the exaltation of physical science and the hardly restrained worship of natural law. These *must* have their way, whether the interposition of God be sought or not, and so the living God may almost unconsciously be subordinated to His own ordinances. The question is thus forced upon us. Is the evidential value of medical mission work to be limited entirely to that of human benevolence? Is it the Divine plan that the work of healing the sick co-operate harmoniously with higher and more spiritual forces, but itself be relegated to another and less immediate relation to God than it held in apostolic days in the work of extending His kingdom in the world? These inquiries, combined with the general trend of scientific thought, at any rate suggest the need of a guard, a strong and watchful guard, lest this department of our work should lapse into a merely humanitarian benevolence and lose its original force as a witness to the living God ; and if it be no longer within our power, by means of bodily healing, to make such striking and immediate display of the power of God as in the apostolic age, let us by all means see to it that our medical missions do make it abundantly clear, that, beyond the human instrument, and above the laws of nature, this whole department of missionary work is still one unmistakable expression, both of the wisdom and the love and the power of God.

In apostolic days it was rarely, if ever, disassociated from the work of evangelism. It was indeed not only an aid to it, but itself an integral part of that great evangel, which the earliest Christian missionaries were sent to

announce. Apart from that it had but little meaning, and would probably have had no part in the missionary economy of the Church.

And no less closely was it linked with the duty and privilege of prayer. In fact the apostolic record is a strangely apposite comment on that two-fold word of our Lord (Matt. xxi. 21, 22), "Verily I say unto you, if ye have faith and doubt not, ye shall not only do what is done to the fig tree, but even if ye shall say unto this mountain, Be thou taken up and cast into the sea, it shall be done. And all things, whatsoever ye shall ask in prayer, believing, ye shall receive."

In some of the recorded cases the apostles spoke to the mountain, in others they prayed to the Lord. In both the word brought health and healing, and whether we believe in what is commonly termed faith healing or not we all hold firmly to the power of believing prayer. Besides this double guard of preaching and of prayer there is perhaps a still profounder need of what Wesley terms

"A jealous just concern
For Thine immortal praise."

In these days of triumphant and rapidly advancing scientific investigation, and of popular social amelioration, we need to bear in mind that the end of medical mission work is not the glorification of Western science, nor is it merely the expression of a generous human sympathy with our suffering fellow-creatures, but the great aim through it all should be the revelation of the power, the wisdom and the love of God. If the learning of the nineteenth century is intended to take the place of the miraculous interpositions of the first, then upon those who have undertaken this medical work rests the solemn responsibility of so employing, so disclosing, or so hiding that learning, that no ray of the Divine glory shall be eclipsed or even dimmed by the most brilliant achievements of medical science. In regard to this the Lystran miracle is priceless beyond expression.

A CHAPTER IN CHINESE SURGERY.

BY J. DUDGEON, ESQ., M.D.

The Golden Mirror of Medicine describes briefly eight manual methods for the treatment of fractures of the bones, injury to the sinews, dislocations, etc. These are the *moh* (摸) or feeling method, the *chieh* (接) or uniting method, the *twan* (端) or supporting method, the *t'i* (提) or elevating method, the *an-moh* (按摩) or pressing and rubbing method, and the *t'ui-na* (推拿) or the method of pushing and taking hold of (so as to place it in position.) These various hand methods may fail or require to be supplemented by apparatus. Ten different forms are given by which the broken may be joined, the

slanting made straight, the elevated made even, the depressed raised, the dangerous made benign and peaceful, the severe made light, together with the administration of medicine and a nourishing diet.

1. The first is termed *kwo-shai* (裹帘) by the use of bandages of white cloth; the length and breadth according to necessity.

2. The *Chen-ting* (振挺) or use of splints; length $1\frac{1}{2}$ feet; in roundness the size of a cash or like the baker's roller (*mien-chang*.) The blood and air at the part of injury have collected, and the parts are in consequence painful, swollen and hard; if beaten, above and below, once on each side the air and blood will be dispersed and the symptoms will diminish. The principle of the method is this. The head is bandaged tightly, and the soles of the feet are clapped to disperse the blood in the heart and cause the air of the viscera to circulate and expel the superfluous blood from the heart, and thus the nausea ceases and the body becomes comfortable; but if notwithstanding this the patient remains unconscious, and the phlegm in the throat resembles the sound of sawing wood and the body becomes rigid and there is froth in the mouth, the case is hopeless.

3. The *P'i-chien* (披肩) or shoulder cap is prepared of ox-hide; in length 5 inches, breadth 3 inches, with two holes at the two ends, to be tightly bound to the injured part with cotton string; the patient to recline. This leather cap is softer and more movable than the wooden splints. Having used the various manual manipulations necessary to restore the injured part to its original position afterwards take bandages and fasten the leather cap to the shoulder. Then take a board on which to rest the hands, over two feet long and three or four inches broad, with ropes passed through at the two ends; and suspend it and let the patient prostrate himself in it so that the shoulder may hang down. Continue this practice for seven days, and if the parts have recovered, the bandages may be removed; if not they must still be worn, and if not continued a permanent defect will be the result.

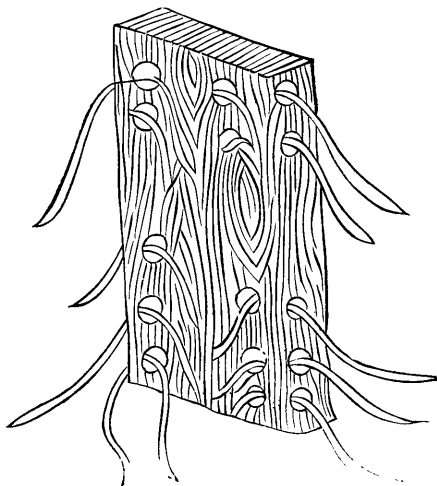
4. *Suspension* (攀索) from a rope from a high place; the rope to be grasped by the hands.

5. Three bricks (疊甓) are to be used for each foot, upon which the feet are to be placed. This is to cure injury of the thorax, abdomen, axillae and ribs from whatever cause the injury may have been inflicted. The chest has become depressed and must be elevated. The patient first takes hold of the ropes, standing on the bricks, and must fix the loins. Then one brick is removed from each side; the patient straightening his body and fixing the thorax. This is to be repeated three times, when the feet will have reached the ground and the air will have circulated and the superfluous air dissipated; the depressed will have become elevated, the bent will have become straight. Then use the bamboo screen with which he is to be enveloped and eight broad

See page 60.



SIXTH METHOD. *Communicating Board.* See page 61.

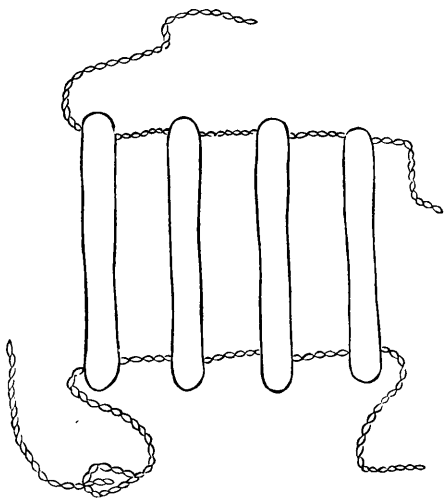




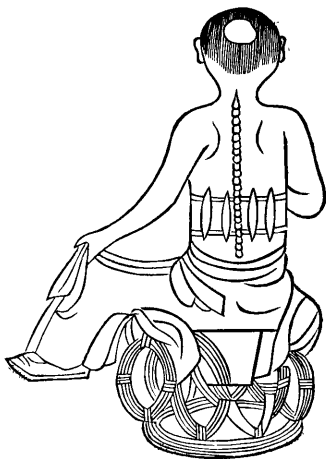
Communicating Board. Front View. See page 61.



SEVENTH METHOD. *Loin Pillars.* See page 61.



Loin Pillars. Back View. See page 61.

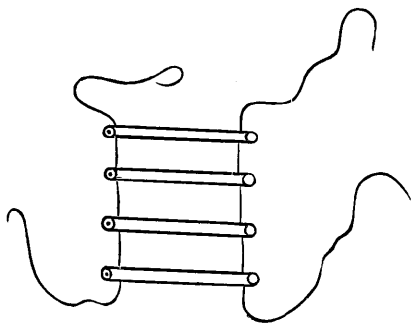
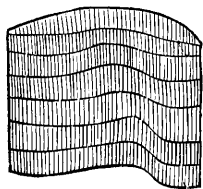


EIGHTH METHOD. *The Bamboo Screen* in use. See page 61.



EIGHTH METHOD. *The Bamboo Screen.* See page 61.

NINTH METHOD. *The Deal Paling.* See page 61.



bandages with which he is to be bandaged, and everything is to be made proper and suitable. He then ought to recline on his back, and when sleeping ought not to lie either face downwards or on one side, and a pillow ought to be placed under the loins, and all movements to the right or left forbidden.

6. *The Communicating Board* (通木.) Take a piece of wood, three inches in breadth, two in thickness and the length from the loins to an inch above the shoulder; it is even on the outside, but hollow on the inside towards the spine with which in its hollows and elevations it must agree. It is perforated by five series of apertures. The diagram will illustrate its mode of application better than any description. It is so bandaged that the wood is kept from moving, and so advantage to the injured part secured. Soft cotton wool is applied to the side in contact with the body to prevent pain. In the case of injury of the spine, the joints laid open, or the bones elevated,—and as a result spinal deformity—the patient is to lie on his face, and another person is to stand on his shoulders, and the surgeon must closely examine the deformity and decide on the use of the light or heavy plan, whether to use the *twan* or supporting plan, or the *t'ui-na* the pushing and laying hold of, or the *an-moh* or the kneading to make the fissures unite; and then afterwards use the piece of wood as above described.

7. *Loin Pillars* (腰柱.) Take four pieces of wood like flat runner poles (used for carrying things) one inch broad and half inch thick; the length according to the injured part; holes to be made through them on the sides at the two ends, and cords passed through uniting them all together. In cases of injury to the lumbar spine, whether of the bones, sinews, or flesh, such as dislocation and curvature, a medicinal powder mixed with vinegar is first applied, then the pillars are applied quite straight on the two sides of the spine; a mattress of artemisia is made to cover the pillars, in order to exclude wind and perspiration, and over all a broad bandage is wound round the body and drawn tightly, and the necessary medicine administered.

8. *The Bamboo Screen* (竹籬), in size according to the injured part, no matter where. The manual method must first be employed, then the bandages, and last of all the screen, and thus correct what is uneven or movable.

9. *The Deal Paling* (杉籬) is an auxiliary application. The length, breadth, bent or straight, projecting or depressed condition, must first be examined, then this wooden apparatus prepared; the number of pieces required must be calculated, and the order of their application remembered; holes at the two ends of each require to be made, through which cords are passed, with which they are tied together like a fence, and hence the name. They must not be so closely placed as in the screen. The fence is to be placed outside the screen and tied tightly with cords, and outside this again other cords must be used, with which to give strength and fixity and to prevent the

joints now brought together from getting displaced. The screen alone, it is feared, may not give the necessary and required strength and fixity, hence this fence is recommended, that the parts may unite strongly.

10. *The Knee Cap* (抱膝) is made with the object of enveloping the patella. It consists of a bamboo circle with four feet. A piece of bamboo is taken and bent into a circular form and wound round with hempen thread, of which also the feet are made. White cloth bandages are employed and wound round the hoop and feet, and although inconvenient for the knee it gives no pain or trouble. The patella covers the ends of the two bones—femur and tibia; it is naturally very movable, and if injured it leaves its place, being displaced to one or other side; and although it can be replaced by the manual method, in walking, standing and the like, it is liable to return to its displaced position, hence the necessity for the enveloping plan to make it strong, and consequently prevent it from leaving its proper place, and thus prevent any limping defect which otherwise would be sure to arise. The apparatus as figured is placed on the knee, the loop keeps the cap in its place, and bandages are then employed to tighten and secure it firmly.



CASES ILLUSTRATING WHAT MAY BE DONE FOR CHINESE PATIENTS IN THEIR OWN HOMES.

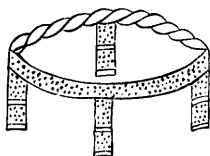
Every one will admit that both for surgical and medical work it is much more satisfactory as a rule to have the patient in your hospital. Some, however, go even further and question the advisability of treating any medical or surgical case in a Chinese home. If it can be done satisfactorily, in my opinion it ought to be done; for in this way we can reach patients who would on no account enter our hospitals.

The following cases were treated in their homes:—

Case I. Mr. C., age 28, a Hunanese, came to see me about a tumour in the region of the parotid gland. He did not wish to come into the hospital, so after seeing the temple where he was lodging I agreed to operate there. Dr. Merrins, of the American Church Mission, kindly assisted me, and the tumour was successfully removed. He was visited daily for about a fortnight. Afterwards he came to the hospital to be dressed, and made a good recovery.

Mr. C. is the only son of one of the gentry in a *hien* not far from Chang-sha. After the wound had quite healed up he returned to his home, and since that time several of his clansmen have called upon me. One of them gave me a pressing invitation to visit Mr. C.'s village, assuring me that under his care I would be quite safe, if I put on native dress.

TENTH METHOD. *The Knee Cap.* See page 62.



The Knee Cap in use. See page 62.



Case II. was introduced to me by the father-in-law of Mr. C. Mrs. L., the wife of an expectant official, is also from Hunan and from the same *hien* as Mr. C. Mrs. L. had been suffering for years from a tumour of the right breast, and the native physicians had exhausted their resources in endeavouring to disperse it. With the kind assistance of Mrs. Bell, of the Wesleyan Mission, the growth was taken away. The wound healed up without any trouble, and since the operation the patient's health has improved very much.

Case III. was introduced by Mrs. L. Mrs. T., a young lady age 22, is also from the same *hien* as Mr. C. and Mrs. L. She complained of a hard stony-like growth in her left breast. The age and the time it had existed without any involvement of the axillary gland were against cancer, but because of its stony-like hardness I obtained the consent of the husband to remove the whole of the gland if necessary. Mrs. Hart kindly assisted me, and the tumour was removed. On making a section with the knife the peculiar creaking which one gets in cutting through a schirrous tumour was well marked. Feeling in doubt I laid the matter before her husband, who replied very sensibly, "we do not know what ought to be done; we trust you, but if you have any doubt in your mind remove the whole breast." This I did, and the patient made a rapid recovery.

The first of this series of cases came in such an unaccountable way that one feels that it must have been an answer to the many prayers that have been offered up for Hunan. As a result of these operations I believe that three of the most influential families in that *hien* have been changed from enemies into friends, and the way is being prepared for a visit to their homes.

Case IV. was that of a young lady, Miss W., age 15, who was the possessor of a supernumerary thumb. Mrs. Bell kindly helped me, and the extra thumb was removed. The two thumbs had a common joint, but in spite of an attack of erysipelas the wound healed up perfectly, and when I saw her last the scar was hardly noticeable.

A remarkable feature in the above cases was the readiness with which the patients consented to take chloroform and the perfect trust they showed while it was being administered.

Case V. Mrs. T., a Chinese lady, was first seen when in a state of hyperpyrexia. She was carefully nursed through this period, and with the fall of the temperature the rash of small-pox made its appearance. The late Mrs. North, of the Wesleyan Mission, generously volunteered to take part of the nursing, and to her tender care that Chinese lady owes her life. Not even a single scar was left, and she recovered perfectly.

Case VI. Mrs. T., a mandarin's wife, had an attack of acute bronchitis and asthma. The native doctors had made her a good deal worse, so that for several nights she had obtained scarcely any rest. Having done their best

they retired and said the case was incurable; the patient must die. Some months afterwards Mr. T. told me that he was very much afraid of foreign medicine, and it was only the fact that his wife could not recover, according to native opinion, that induced him to allow a foreign doctor to be called in. Mrs. Bell was good enough to help me with this case.

But it may be asked what about the opportunities for spiritual work? When in the hospital patients have the option of attending the daily services, and while in the wards they can be spoken to at any time. In their homes the opportunities may not be so frequent, but still they are frequent enough, with the additional advantage that you have the whole family instead of a solitary patient.

A. M. M.

PHAGEDENIC PHARYNGITIS,

THE CAUSE OR RESULT OF HIGH FEVER, WITH PETECHIAL ERUPTION;

(OR SIMPLY CO-INCIDENT)?

By T. GILLISON, M.B., C.M., *London Mission, Hankow.*

E. P. H., a Swedish gentleman, age 27.—Patient, who had been complaining for two days of slight malaise (discomfort in his mouth, *not* throat) and loss of appetite, was seized on Friday, Sept. 14th, 1894, at 7.30 p.m., with an ague-like attack, which we shall describe below. It may be noted here that patient had been resident in this port (Hankow, Central China) for three months, and had been stationed in North China (Shen-si) for some three years previously. The summer was a trying one, and he felt it much, especially the latter half of August, during which the average daily maximum of the thermometer was over 100° F. in the shade, and the average minimum at night over 90°.

Patient, who was formerly a sea-faring man, had suffered from ague for some twelve months together, some eight or nine years ago.

Present illness.—Cold stage of rigor set in at 7.30 p.m. and lasted half-an-hour. It was characterised by chattering of the teeth, violent shivering, aching of limbs and a cramped feeling in the legs, also by headache. Hot stage commenced at 8 p.m., lasting three hours and increasing the headache. Patient at times delirious, vomited freely and had great thirst.

Temperature at 8 p.m. 100.6. Friends gave him antipyrin grs. 10. At 9 temperature was 102.6. Sweating stage began at 11 p.m., and was over at 1 a.m., when patient was given a tepid bath, after which he fell asleep.

Saturday, Sept. 15th (second day).—Patient got up and spent the forenoon reading and writing, but did not go downstairs. At 4 o'clock he took

six grs. quinine. At 6 p.m. had a second attack similar to the first, but less severe. Perspiration in third stage was profuse. Patient had a fairly good night's rest.

Sunday, Sept. 16th (third day).—This morning a petechial eruption was found to have broken out on patient's face, limbs, &c. The spots, which were of a bluish colour, were most numerous on the face (perhaps from thirty to forty spots), and varied in size from a pin's head to nearly quarter of an inch in diameter. There were two on the mucous membrane of the lips, the pellicle of which had burst, and blood was oozing from them.

There were spots, similar to those on the face, on the arms and thighs, chiefly on the extensor surfaces, also a few, perhaps half a dozen, on the chest and one only on the abdomen.

It may be noted here that the spots gradually faded from day to-day, the blood in them drying up, and assuming a brownish colour before being absorbed. No fresh crop appeared, and no other eruption showed itself during the whole course of the illness.

Patient was spitting a little blood, which he believed came from his lips, and did not at this time make any complaint of pain in his throat.

During this day he had quinine grs. 5 at 10 a.m., grs. 10 at 1 p.m. and grs. 10 again at 4.30 p.m. Fever said not to have returned on this day, but temperature was not taken. During the night patient continued spitting blood, felt uncomfortable, and had troubled sleep.

Monday, Sept. 17th (4th day of illness).—Patient awoke feeling exhausted and complained of sore throat, now for the first time

The above history has been taken down from patient's friends. Owing to my being absent from home I was not called in till this the 4th day of the illness.

Monday, 4 p.m.—Found patient in bed, but able to sit up and not looking at all dangerously ill. The temperature had been taken at noon, and was then 100.6. The pulse was 70 and regular. The tongue was slimy and coated with a brownish white fur. The throat was slightly congested, and at one spot on the left side a few bluish veins stood out, and from that part a little blood was oozing. This explained the spitting of blood. The case seemed to me one of ague with petechial eruption (extending to the throat), although typhoid was kept in view as there had been several cases shortly before among foreigners in this port. As the bowels had not been opened for two or three days a dose of castor oil was given, and a diet of milk, soup and arrowroot ordered.

Three hours later (7 p.m.) patient had a motion with blood, also similar motions at 7.45, 9.15 and at intervals during the night.

Tuesday, Sept. 18th (5th day of illness).—Patient passed a restless night. Temperature at 8 a.m. 102.7. Pulse 92. Later on, patient's throat was examined, and slight ulceration of both tonsils was found to exist.

Six grs. each of sod. salicyl. and quinine were ordered to be given every four hours; also a throat wash containing KCl. O₃. The temperature rose to 104°, and the headache became much worse. Ten grains of antipyrin relieved this somewhat for the time being.

The urine voided was 'smoky', and when examined two days later was found to contain numerous red blood corpuscles. No tube casts were found, but only two slides were examined.

The evening temperature rose to 104.4. Pulse 97. Respirations not noted. Patient was given sod. salicyl. and quinine as above, also antipyrin grs. 10.

Swallowing was now attended with much difficulty, and spitting of blood mixed with mucus continued.

Wednesday, September 19th (6th day).—Temperature during this day ranged from 102.9 to 104.5.

The left tonsil on examination was found to be slate coloured, and the pharynx was of a dusky red hue.

Pilocarpine gr. $\frac{1}{2}$ was administered, after which perspiration was very free, but the temperature still continued high, 103.9. Pulse 124.

Thursday, September 20th (7th day).—The pain attendant on swallowing was now intense. Temperature varied from 100.4 to 104.

A hypodermic of morphia was given at 10.15 a.m. to give rest and some relief from the intense pain. It is interesting to note that this was followed by a marked temporary fall in the temperature. This was 104, at 9.30. a.m. ($\frac{3}{4}$ hour before the morphia was given), and fell to 101.2 at 12.30 and 100.4 at 1.25.

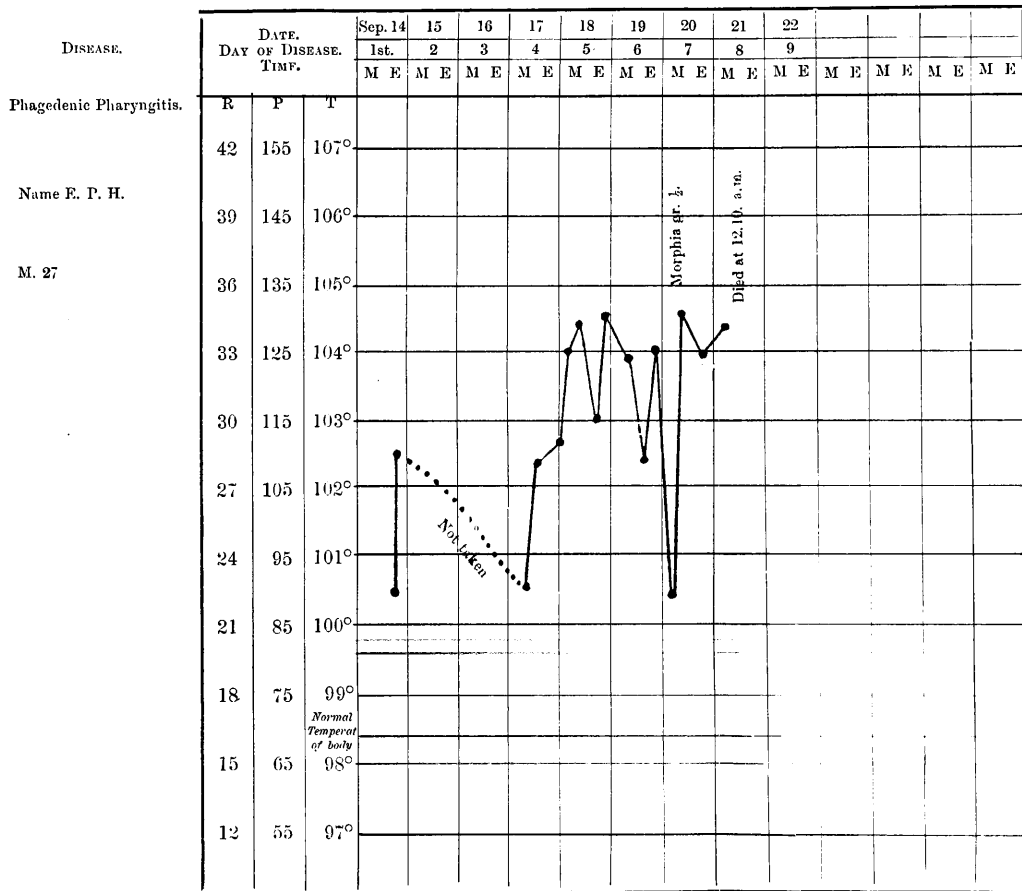
The relief afforded by the morphia enabled patient to take milk without pain. He had a copious brown coloured loose motion, with no blood, at 6. p.m.

Examination of Throat.—Left tonsil was a mass of grey slough, and the right was similar, but smaller in size. Dull red inflammation spreading upwards and inwards from left tonsil. Two patches of yellow colour on the posterior pharynx. Tongue moist and only slightly furred, and not swollen.

Patient quiet. Breathing only slightly laboured. He was alert when talked to, and asked for food (milk, meat juice, etc.) from time to time.

The petechiae on face, chest, etc., had now assumed a dark brown colour were drying up, and could be felt raised above the skin. Some of them were surrounded with a greenish halo. No other eruption was visible. Patient said he had no pain all along, except the pain in the throat and headache.

The temperature at midnight was 104.5.



Friday, September 21st (8th day).—Temperature remained high. Pulse got weaker. Diarrhœa set in, and was very frequent. The condition of the throat got still worse. The gangrene had now involved the soft palate which was perforated to the left of the middle line.

Patient died at 12.10 a.m., Saturday, September 22nd :—eight days from the commencement of the attack. The diet during the illness was milk, meat juice, brandy and egg nog ; at first by the mouth and later by the rectum. The medical treatment has been alluded to above. I do not think anything could have saved the patient, who probably died of septic absorption from the sloughing tonsils and fauces.

McBride in his 'Diseases of the Throat, Nose and Ear' says : 'The prognosis of gangrenous pharyngitis, whether primary or secondary, is extremely unfavourable,' and adds in referring to treatment (antiseptic gargles, etc.) that it is 'a disease which cannot be treated with much hope of success.'

Diagnosis.—This seems uncertain. Petechial eruptions occur in the course of typhus, scarlatina, small-pox, relapsing and malarial fevers, acute scorbutus, sunstroke, plague, etc.

The diagnostic rashes of typhus, scarlatina and small-pox were wanting, and in fact there seemed to be nothing to enable us to decide whether the case was one of primary throat affection (cause obscure), or of throat affection secondary to typhoid, malarial, or other fever, with petechial eruption. The symptoms seem to be capable of explanation on either hypothesis.

My apology for publishing the case is the extreme rarity of phagedenic pharyngitis.

MEDICAL MISSIONARY ENTHUSIASM IN THE HOME CHURCHES.

BY JOHN C. THOMSON, M.A., M.D., *Hongkong.*

To-day, as never before, the Church of Christ is rising to a realization of the meaning of her existence in the world, and is bracing herself to the task of world-wide evangelization. During my recent visit to England it was my privilege, while acting as Special Centenary Assistant to the Home Secretary of the London Missionary Society, to come into very close touch with the Churches of at least one great denomination, which in respect of missionary interest is but a type of all the denominations ; and I return to the mission field cheered and strengthened by the conviction that the spirit of fervent prayer for the work we are doing, and for ourselves amid our work, is widespread, and is rapidly spreading in the home Churches. On all sides such

prayer is having its natural reflex results in personal consecration to missionary service, if God should open the way, and meantime in earnest effort to diffuse missionary information and enthusiasm. In individual congregations, indeed, one found that very much depended on the spirit of the ministers, but taking the Church as a whole there is undoubtedly a great wave of missionary zeal that did not exist even a very few years ago.

On the crest of this wave is the Church's interest in medical missions. Some question their necessity in such a region as India with its comparatively abundant provision for physical healing, but none their desirability all over the China field, and the objection as regards even India is surely ruled out by the fact that medical missions are being established in many of the larger cities of the home lands themselves as recognised helpers in the evangelization of the masses. All the great societies are affirming the value of this agency by active efforts to push it to the utmost, and one of them, the Church Missionary Society, has appointed a medical man as medical secretary to give his whole time to the development of this branch of its operations.

No topic is of greater interest to a missionary audience than a description of this practical preaching of the spirit of the Gospel of Jesus, "goodwill toward men." Many who seem untouched by appeals in any other form listen with breathless attention to the story of healing combined with teaching, while not only to the medical missionary, but often to other missionary speakers as well, is addressed the direct petition, "Tell us something of the medical mission work." The apathy that once prevailed is passing away, and the Church having at length aroused herself seems to regard this as one of the most natural, and most likely to be successful, of all missionary methods.

A direct result of this is seen in the increased provision that is now being made for the training of medical missionary students. In Edinburgh, for instance, the Medical Missionary Society has greatly extended its sphere of action by enlarging its premises and its facilities for the acquirement of practical experience, by opening its doors to women as well as men, and by the appointment of a special organizing secretary to arrange for medical missionary meetings all over the country. One might speak at length on this subject both as regards Great Britain and America, where movement along these lines seems yet more vigorous, but confining myself to what has come under my own observation let me mention the Livingstone College in London, recently organized, as promising a large increase of missionary work, medical missionary in nature, though wisely abstaining from use of the name. None recognise more clearly than do its promoters the advantages of complete medical training; but recognising too the fact that many in isolated localities will for a long time to come continue to be faced with the necessity of undertaking healing work without the presence of a qualified medical man, they have

opened this college, offering a systematic curriculum in elementary medicine and surgery, extending over one or two years, for intending missionaries to outlying regions. Its students give their whole time and strength for the time being to medical study, with practical work, under the guidance of able teachers, one of whom, by the way, is Dr. Patrick Manson, of China fame; so that, while for obvious reasons each applicant for admission is required to sign a pledge that he will never with only such training describe himself as a "medical" missionary; those especially who take the longer curriculum will have no unsatisfactory preparation for practical work when that is thrust upon them by circumstances. The demand for such an institution as this, having as its function the spreading of medical missionary operations more rapidly than is likely to be accomplished by more ordinary means, seems to me a very real sign of the times.

Yet again, medical missions as such have claimed and received definite recognition at the great parliament of the medical men of Great Britain. At each of the last three annual meetings of the British Medical Association a morning has been allocated by the Executive Committee to a medical missionary breakfast, provided conjointly by the Edinburgh Medical Missionary Society, the London Medical Missionary Association and the medical branch of the Church Missionary Society already referred to, to which all the medical men attending the meetings are invited. Last year at Bristol a thoroughly representative gathering assembled to express by their presence their interest in the subject, when addresses were delivered by Dr. E. F. Neve, of Kashmir, as representing India, and by myself in the name of China.

Over against these illustrations of the advance of missionary interest in general, and of medical missionary enthusiasm in particular, some pessimist will doubtless call to mind the huge deficits shown in many missionary balance-sheets a year ago, and likely to recur in the present year. These deficits, however, were not due to diminution of income, for the reverse is the case, but to increase of expenditure and to a disproportionate increase of revenue. Our leaders at home have gone forward a little faster than the rank-and-file were prepared to do. To these leaders, and to the Church itself, we owe a duty, which we have not in the past fully discharged. Enthusiasm cannot develop on thin air; it must have facts, and we on the field must furnish the facts. Very few medical missionaries are at any particular time at home on furlough to plead with the living voice the cause of medical missions, and it is incumbent on us to supply this lack by a freer use of the pen than we have been making. All of us can tell a tale of doors being opened to the Gospel, of opposition being borne down, of men and women being turned from the worship of idols to the service of the living God, through the powerful instrumentality of medical mission work, and it is a tale that ought

to be told more widely than it has been. Great progress has been made, as I have tried to show, but it is only after all a beginning of what may be looked for; and I want to urge my brethren in the China mission field to join myself in an earnest resolution to do what in us lies by means of communications to our missionary journals, to our various societies, to our particular Churches, to individuals, to foster and quicken medical missionary enthusiasm in the home lands. We are all apt to plead lack of time, and with just cause; but while I have been cheered by what I saw in England I have also had laid on me this sense of responsibility in the matter of the future of medical missions, and while I gladly accepted the editorial invitation to pass on through these pages the word of cheer I cannot refrain from availing myself of the opportunity it affords me of urging more earnest service in this respect than we have hitherto rendered.



De Spiritu Sancto.

Veni, Creator Spiritus,
Mentes tuorum visita,
Imple supernâ gratiâ,
Quae tu creâsti pectora.

Qui Paracletus diceris,
Altissimi donum Dei,
Fons vivus, ignis, caritas,
Et spiritalis unctio.

Tu septiformis munere,
Dextrae Dei tu digitus,
Tu rite promissum Patris,
Sermone ditans guttura.

Accende lumen sensibus,
Infunde amorem cordibus,
Infirma nostri corporis,
Virtute firmans perpet.

Hostem repellas longius,
Pacemque dones protinus,
Ductore sic te praevio
Vitemus omne noxium.

Da gaudiorum praemia,
Da gratiarum numera,
Dissolve litis vincula,
Adstringe pacis foedera.

Per te sciamus, da, Patrem,
Noscamus atque Filium,
Te utriusque Spiritum
Credamus omni tempore.

Sit laus Patri cum Filio,
Sancto simul Paracrito,
Nobisque mittat Filius
Charisma sancti spiritûs.

“ Popularly ascribed to Charlemagne,
but certainly older.”

Whit Sunday, 1895.

That day, so many years ago,
 They sat apart,
 Wond'ring perhaps, while waiting yet
 With faithful heart.

Their faithlessness not once nor twice
 Rebuked had been ;
 They could not doubt the Risen Lord
 Their eyes had seen.

"Tarry ye here" had been His word,
 "For Power shall come,
 "When in your hearts the Comforter
 "Doth make His home."

They sat within that upper room
 Awaiting still,
 When sudden mighty wind from Heaven
 The place did fill ;

And cloven tongues of living flame
 On every head did rest.
 —Not less our need than theirs O Lord,
 We, too, would thus be blest.

The stormy wind is blowing strong
 This morn without,
 O come, and thus sweep through my soul,
 Dispel all doubt.

Thy gentle Breath, the Breath of Life,
 Hath breathed on me,
 I live by Thee, but O to live
 Abundantly !

O that the living flame again might come
 From holy Fire above,
 That true and faithful I might witness to
 My Saviour's Power and Love.

M. A. P.

BREVIA THEOLOGICA.

"I believe in the Holy Ghost, the Lord and Giver of life." This description of the Holy Spirit was inserted in what we usually call the "Nicene" Creed at the council of Chalcedon, A. D. 451. Its position in the Creed is due to an interpretation of St. Paul's words in I. Cor. xv. 45, which is now generally rejected; some of the early Greek expositors explained the latter part of the verse to refer to the bestowal of the Holy Spirit on Christ. Were a modern theologian required to insert the phrase in the Creed he would probably place it earlier, *e.g.*, "And in Jesus Christ His only Son, the Lord and Giver of life." Still, it does not follow that the phrase as it now stands is wrong. It is a too common practice to think of the Father, the Son and the Holy Ghost in such a manner as to neglect the truth that "there are not three Lords, but one Lord." "What things soever the Father doeth, these the Son also doeth in like manner," justifies us in saying: whatsoever things the Son doeth, these the Spirit also doeth in like manner." Of the "gifts" of the Spirit we may say that He giveth "nothing of Himself," but the things which He "taketh of" the Son, these He giveth unto us.

What is the meaning of the word "life" in the phrase which we have quoted above? The word "became" which the Revisers have had to insert in I. Cor. xv. 45 shows us that that particular reference is to a "life" which our Saviour gained the power to give when He rose from the dead. But although that "life" is most assuredly included in the right meaning of the phrase we can truly say that the Holy Ghost is "the Lord and Giver" of whatever we call "life." In this light how significant is the very second verse of our Holy Scripture. Let the 37th c. of Ezekiel be read over, remembering that "breath," "wind" and "spirit" are the very same word as that used in Gen. i. 2. A different word is used in Gen. ii. 7 for the "breath of life," but in the Septuagint version the Greek rendering of "breathed" is only once more used in the Holy Scripture—it was used of our risen Lord when He "breathed" on His disciples the breath of the new life and said unto them, "Receive ye the Holy Ghost."

To a medical man the word "life" in its physical sense is not merely a medical term; it is *the* medical term. His appointed duty is to save "life." To a medical missionary it is a matter of no small importance to see whether that word "life" in its physical sense is to him a sacred word or a secular one. A true view will claim that all which bears the name of "life"—physical, intellectual, social, political, moral or spiritual, is from God, who is the living God. "With thee is the fountain of life." A help to such a true view

will be found in Dr. Hort's thoughtful words in his Hulsean Lecture on "The Way, the Truth and the Life," pp. 102, 103.

The Saviour "came as the Anointed King's Son to His own inheritance to deliver a holy land and a holy people from invaders and usurpers, and to bind up the breaches and severences which they had wrought. Sometimes the intruders are diseases or disablements, sometimes they are sins, sometimes they are unclean spirits, in whose working disease and sin are inextricably blended. But in all cases the expulsion is called an act of saving or salvation; and it follows on that homage to the rightful Sovereign above and to Him whom He has sent, which is called faith.

"And so always the precious possession which is rescued out of the hand of the enemies is Life. That one name alone expresses the summed result of Christ's acts of various and limited salvation. The diseases, weaknesses, crippings, losses of sight or speech or hearing, and losses of the governing reason, whether they had but lately come to pass or were of long standing or existed from birth, were only so many inroads of death, partial assimilations of the living body to the inert mimicry of the corpse. The healings and restorations were but differing gifts of life that had been lost, renewals of some one of those forms or activities or faculties of the united body and soul which make up the single picture of life. Even the restoration of a withered hand is spoken of as a part of what is emphatically called 'saving a soul' as opposed to 'slaying;' of saving, that is, the central and supreme seat of life within the body from the death which in slaying it would slay not one member but all."

Side by side with this let us read Dr. Newman Smyth's words in "Christian Ethics," p. 112. "Personal life is something morally to be desired. Our love of life is a moral love of it. Life, which for us and in our consciousness of it, means not merely existence, but continued personal being, is itself an object of ethical desire; it is a good will of God to be realized in the preservation of His children To whatever degree life has been as yet realized in personality, to that measurement of attainment it is to be held up; it is not to be suffered to lapse, to fall below itself, to sink from the plane or personality to the level of the mere existence from which it has been uplifted into self-consciousness. Life, personal life, is to be regarded as an achievement of spirit, has itself the achievement of a creative end of being. And this achievement of the spirit is to be preserved in the final good (Luke xxi. 19: the soul is to be won)."

One more extract from the same writer (p. 136) puts very forcibly the contrast between Buddhism and Christianity on a line which the reader will have no difficulty in connecting with the above paragraphs: "In the legends of Buddha he seeks to console the mother who had lost her child by bidding

her go to all other homes and learn that each has its sorrow, and that there are many more dead than living. Jesus comforted the sisters at Bethany by going in the power of the living God to the tomb and proclaiming the resurrection and the life."

Any reader who would like to follow up the suggestions of these fragmentary "brevia" will find much help in other parts of the two works from which these extracts have been taken, especially in the whole of Dr. Hort's third lecture on "I am . . . the Life," pp. 95-149, and his note on "Life," pp. 189-197; in "Christian Ethics," pp. 331-356 (Section I of Chap. II of Part Second, "The Duty of Self-preservation"). See also Dr. Westcott's note, and additional note, on John i. 3 f. and additional note (2) on I. J. v. 20.

G. G. W.



The China Medical Missionary Journal.

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The "Ti'en Tsu Hui" is a society whose inauguration has been prominently brought before the public quite recently in Shanghai and other ports. With the general object of that Society the supporters of this Journal can but have the deepest sympathy, as we have frequently pointed out the baneful effects of this cruel custom of foot-binding. It may be doubted whether the proposal to memorialise the emperor is a good one; personally we rather fear it may do more to defeat, than to advance, the good cause the promoters have at heart. The non-binding of the feet was the one Manchu custom the conquerors failed to force upon the subject Chinese. More than one emperor, from the days of Yung Tsen down, has tried to suppress this custom, but it has defied all those attempts to kill it, and we quite believe its vitality is sufficient to outlive another attack. At least it seems to us that this is not the time to ask a Manchu emperor to try and put it down, and the smallest evil that will probably follow this memorial will be a prompt and determined opposition to the Society amongst the bigoted literati, which will not only frustrate our effort but undo much of the good work which has already in a quiet way been accomplished. We have always been of the number of those who have steadily maintained that quiet and continuous moral suasion *on the Christian converts of the country* is the true and only, as it is the Scripture way, of bringing about such reforms. This must not be construed into meaning an occasional feeble remonstrance against the custom: let example and precept be vigorously used and societies formed, but all such action must never step beyond the bounds of persuasion. We do not wish these remarks to be taken as indicating a position of hostility on our part to the new Society, which proposes to work on heathen and Christian alike: on the contrary the Society by publishing useful literature on the subject (and we understand they are willing to meet the wishes of particular missionaries in this respect) will enable us to place the matter more intelligibly before our converts than ever before. The one point on which we do differ from the Society is in its "secular" basis. It is true that the prospectus states that the work is a

Christian one, but it has been particularly stated, both in public and private, by responsible officials of the Society, that they wish their appeal to be in no way on Christian grounds but purely on humanitarian ones. The reasons that have been alleged for the decision are: (1) The fear of sectarian differences causing difficulties in practical working, and (2) That an appeal based on Christian principles would not appeal to the great mass of the Chinese people! As to the first we feel sure the fear is groundless. The two very successful missionary conferences of 1877 and 1890 showed how small were the differences of the Protestant societies and on how many subjects they could combine in common action: we leave it to the Society to say that our Roman Catholic brethren would not join us in such a movement; we would not so insult them as to even suggest such a thing. The second reason advanced can surely only be due to ignorance. In the face of the fact that from Hankow alone during the last seven years the Central China Tract Society and the National Bible Society of Scotland have *sold* (not given away gratis) "upwards of seven millions of Christian publications" how can any man tell us that reference to God and religious obligation are objected to by the Chinese? We may be permitted to quote from a private letter sent to us: "The non-Christian character of the Society is due to *ignorance* . . . The founders are ignorant firstly of human nature, and secondly of Chinese ways of thinking. They have not realised the gulf that exists between *seeing* a custom to be foolish, injurious and wrong, and *having the courage in one's own person* to defy public opinion and suffer scorn and ridicule for the assertion of the truth. Only *faith* will enable the Chinese to overcome this custom . . . and in deciding to dispense with an appeal to faith they have doomed their effort to failure." If we thought the various missionary bodies of China were going to hold aloof from the Society we should unhesitatingly agree with our correspondent, but we trust and hope, nay we feel sure, they will not—and the Society's success will be due to those very missionaries that some people will not work with and to the power of that very name, the name of our blessed Lord, that they are so careful to keep out of their programme—afraid, forsooth, of "prejudicing a *good cause* by associating it with the name of God and Christ!!" It needs a Frederic Harrison to keep going a society based on purely humanitarian principles, and even he has had work, but we can assure our friends that they will find it much harder work to rouse any enthusiasm amongst the Chinese on this subject on purely humanitarian grounds. You *can* appeal to them on Christian grounds; they *do* recognise the argument that they should not deform the body God gave them; above all they *have* a conscience, and if you decline to appeal to that what have you to appeal to?

We have faithfully pointed out what we think a vital flaw in the constitution of the Society, but we have good hope that as the work proceeds the

enormity of this mistake will be recognised and rectified. Meanwhile we hope none will hold back from helping this good cause (*i.e.*, so far as they can do so without compromise of principle), because it is not being carried out just as we wish. Let us give the Society our earnest and active co-operation in the name of Him who loved the little children, and under whose banner the Society *must* work if they are to save these little ones from untold misery.

We publish this quarter an important paper by the Rev. D. Hill, to which we would call especial attention. The subject discussed is not only an exceedingly important one for us medical missionaries but a very momentous one for the Churches who have sent us out. The writer is one of the best known and oldest missionaries in China, a man of wide philanthropy and in hearty and practical sympathy with medical missionary work. If, therefore, his views are somewhat different to what we should expect it is not owing to any hostile attitude to us as a body, and this fact should lead us all to weigh carefully what he has written. It is our intention to return to this subject on a future occasion, and so, for the present, we content ourselves with expressing a hope that many of our members, both clerical and medical, will discuss the question raised.

There lies before us a very interesting booklet entitled "A Descriptive Catalogue of the Clinical Museum," by Jonathan Hutchinson, F.R.S. The museum in question, which is a private one, is situated at No. 1, Park Crescent, London, and is under the curatorship of Dr. Williams. The preface informs us that the museum is "an attempt to show that pictorial representations of disease may be of great use in advancing our knowledge of it, and next to ascertain what are the best methods of displaying them." Mr. Hutchinson acknowledges that the idea is not a new one, and refers to the many museums, atlases of pathology, clinical surgery, &c., which have existed for many years, but adds, "with, however, the single exception of the splendid collection at the Hôpital St. Louis in Paris I am not aware that any attempt has yet been made to illustrate systematically the appearances which disease presents in the living subject." The catalogue is enriched by a number of beautifully executed portraits, and at the end is an account of the more important cases shown, within a period of two months, at the clinical demonstrations which Mr. Hutchinson has instituted. Should any of our members be visiting London we strongly recommend them to avail themselves of this institution, and can assure them that they will find every facility and help in studying any particular disease.

The value of such a museum as this depends largely on the width of area from which its material is drawn; for not only do we need for the

drawing of right conclusions many different portraits of the same disease, but portraits of the same disease as found under every variety of race and climate. It is just here that the collection of photographs, drawings and pathological specimens, with the history of each case, of diseases as observed in various countries, is of the utmost utility. Mutual comparison will often lead to the grouping under one family disease of several minor varieties; the variations being due to racial and climatic differences. Until this is done much doubt must exist as to the real nature of many complaints. This is well illustrated by the malady known as "Yaws." Of three specialists, Dr. Numa Rat, of the Leeward Isles, believes that it belongs to a family of "Syphiloids." Mr. Jonathan Hutchinson's opinion "tends rather in the direction of its being merely syphilis modified by race," whilst Dr. Radcliffe Crocker asserts that it is "not dependent in any way on syphilis." Such differences of opinion can only be settled by many observers in many places and by a combination of clinical and pathological, and possibly bacteriological, investigation. We take it that when the Shanghai Medical Conference of 1890 accepted Dr. Boone's offer to set aside a room for a museum in Shanghai, and voted a sum of money for its maintenance, it thereby recognised the responsibility that rested upon us as a medical association, working in a large country of which comparatively little is known, to contribute what we can to the elucidation both of its own peculiar diseases and of the inter-relationship of disease in general. The museum has, we believe, met with little support; certainly not sufficient to justify Dr. Boone in setting aside a room for it. This is a great pity, and we hope our next Conference will look at the matter and try and fix upon some workable plan. Pathological specimens are but seldom procurable, and need great care and circumspection in obtaining them; but good photographs and drawings of interesting cases are within the possible to nearly all of us, and we urge all our members to make it a matter of duty to forward such to the museum with a careful history (and when possible after history too) of every interesting and rare case. We are always glad to publish such cases in the *Journal*, but, in addition, copies ought to be kept in our museum. It would be easy to mention several special diseases which need such collective work as we have been describing, but we name leprosy only, partly because nearly all of us see a good deal of it, partly because a good deal of collective work has already been done upon it, but chiefly because of the wide discrepancy of views which still prevails regarding it. Mr. Hutchinson's museum contains "a leprosy globe," "an embossed globe upon which the distribution of leprosy has been marked with as much accuracy as my knowledge permits." "An inspection of this globe will impress the fact that leprosy is a disease almost confined to sea-shores, islands and river-valleys, and that it prevails under the utmost diversity of climate." It is this fact—a fact which in this huge

continent we can verify or dispute—that has led Mr. Hutchinson to strongly advocate the fish theory of the disease. Probably few of us believe in his views, but they have not yet been refuted to his satisfaction. Amongst the general conclusions on leprosy which he draws from his material is one which we believe, from our own observation, is quite wrong. “That tubercles occur only on certain parts of the surface, the face and hands chiefly. No portrait that I possess shows them on the trunk.” We believe this could easily be disproved by a number of photographs taken in different parts of China; it is a wrong conclusion drawn from insufficient data. On this, and other subjects, *we can, and ought,* to supply such missing data.



Evangelistic.

AN EVANGELISTIC TOUR AMONGST FORMER HOSPITAL PATIENTS.

“ After being committed to the care and keeping of Him who has promised never to leave or forsake us, we started late one evening, about the middle of October, to look up some of the patients who have been resident in our hospitals and have afterwards returned to their homes. Being actuated by an earnest desire to make a further effort to win them and theirs for Christ we thought the best means would be by visitation. With a view to this the names and addresses of in-patients are invariably registered, but we found that, in consequence of fear and other causes, several of these were either false or of such an intricate nature that it was quite impossible to trace them. We had several disappointments of this kind, finding sometimes after walking, as we did one day, several miles across muddy fields and through heavy rain that the name we sought was unknown. But all were not so, and of such the following instances may prove of interest. For several months a lad named Shu Chu-ngao was the originator of all mirth and mischief possible to one with his leg in splints and able only to sit up in bed. Such an apparent drawback did not prevent him arousing the many would-be morbid ones in the Cotham Ward. With such a genial disposition the lad naturally became a great favourite with all. Being very intelligent and able to read, our interest in him rapidly increased. Although of such a lively disposition, his intelligence and ability to read were used for a good purpose. The Bible was his constant companion, and his inquiries about portions which he could not understand, together with our frequent examination as to his knowledge of the truth, led to a very close study of the Word. A hymn book was lent to him, and his forte at times certainly appeared to be singing, or speaking more correctly making a discordant noise, for whilst prayers were being conducted in the hospital chapel, he, on his bed, would lustily unite with them with such spirit and zest, that it was often much to the discomfort of those upstairs.

When many of our patients are unable to attend worship on Sundays, it is our custom to conduct a service in the large ward, so that the bedridden may not be deprived of the privilege others can more readily embrace. These services he appeared to thoroughly enjoy, listening with rapt attention, and singing with great heartiness.

One Sunday evening, during an illness I had, he had been told that on the next day I was to be taken to the Wusueh hills. He immediately asked and obtained permission to visit me. He was assisted to my bedroom and there sat for about two hours, during which time we had an interesting, and I trust profitable, conversation about spiritual things. Although neither of us could kneel, the Lord hearkened to his simple prayer. That evening is one of the brightest memories of my life. After this the hospital being closed, he naturally became despondent. His father came to visit him and, after promising to fulfil all instructions given, was allowed to take the lad and return to his home.

His uncle being in Han-chwan on business, came to the chapel for medicine. As my intentions were to visit the lad, I returned with the uncle to his home, Chi-ma-k'ao, 20 *li* beyond Han-chwan. After such an intimate friendship, and three months' interval, our meeting was one of joyful surprise. His parents are poor. As I entered the hut I found him sitting, resting his leg and assisting in preparing the cotton-wool for spinning. It was encouraging to find that all instructions had been carried out and that his knee was much better, and not less so to hear his mother testify of his faithfulness in daily reading the Scriptures and praying to the God of whom he had learned in the hospital. His cheerfulness had somewhat abated, his most frequent question being, When can I return to the hospital? Can I *now* return with you? The latter request I told him it was impossible to grant, as my journeyings would be far and wide ere I returned, but arrangements were made for his return a little later. Unknown to us, they brought several dainty doughy rolls, floating in a sweet liquid, of which we were obliged to eat. The attitude of the people there was very different from last year, when I was stoned.

Whether God purposes using this lad to undermine the erroneous and evil ideas of foreigners and their ways which now exist we cannot say, but we hope so, as He often uses a lamb to lead.

After eight days' journeying, during which time tracts were sold, sick visited, and the Gospel preached in many places for the first time, we stopped a vendor of sweetmeats whom the village children hail with delight, and inquired if he could direct us to the village of Tsen-kia-nin. "What do you want there," was the inevitable query, for every one appeared to suspect our motives. "A Mr. Tsen, several months ago, was an in-patient at the hospital, Hankow, and we wish to see whether he be better or not. We are also selling good books and preaching the doctrine of Jesus. We have no other business."

He very dubiously replied, "I know him well, in fact I came from there this morning. He is not quite so well now as when he returned."

Among the crowd which had now collected was an old man who was going to the village and kindly volunteered to guide us, at the same time gaining for himself an opportunity of hearing the Gospel.

The man whom we were now on our way to visit, had had a very dangerous and difficult operation performed. It was very successful, and he rapidly became convalescent. He always listened attentively to the "wonderful words of life," and, unlike our young friend, was of a quiet and patient disposition. Friends and relatives visiting the hospital caused him to express a fervent wish to return with them, the journey being difficult and company desirable. Although a longer stay would have been preferable (as was afterwards proved), the wish was granted. Howbeit, he was very grateful for all he had received and left us.

After tramping several miles across fields with our aged guide, we entered a village containing about 130 houses. Mr. Tsen gave us a warm welcome and glad were we to rest. The day being far spent, he asked us to remain the night, an offer we did not hesitate to accept for several reasons; but we could not allow him to leave his bed for us to use, as he wished to do. Much to our surprise, a feast of many courses was prepared, and the one member of the clan who had the most refined etiquette was invited to entertain us. The proceedings evidently interested the large number of onlookers, from the head men to the smallest children, who had forced their way into the guest room to see the foreigners eat. After being soothed and satisfied, and our bedding having been laid upon the ground, we had prayers, in which he, his wife and lads united. Christ was pointed out as the only true and living way; they listened attentively, and then knelt reverently in prayer. But for rats we should have slept well. At dawn we made preparations for the day. By some mysterious means fowls had been prepared, the eating of which we enjoyed. After returning a present and making arrangements for his desired return to the hospital, we thanked God for the entrance gained in such an unlikely place and offered many prayers for their salvation.

At Wu-fen-kia, a village about 20 *li* from Mr. Tsen's home, lives another old patient. Unfortunately he was at market, but the villagers were exceptionally kind, considering we were the first foreigners they had ever seen. We gladly accepted the invitation to sit awhile in their hut, drink tea and eat eggs; they were anxious to prepare a more elaborate meal. As the patient would not return until evening; and we were wishing to press on, we chatted, gave several tracts away, and left, the whole of the villagers politely escorting us until we crossed the fields. Afterwards our servant told us that the reason the villagers were so kind and polite was because we had assisted the said patient by means of the Samaritan Fund, thus saving him from the unpleasant necessity of walking several hundred *li* and begging his rice

en route. This had become known for many *li* around, and undoubtedly accounted for the attitude of the people.

At T'san-ch'i-kang, a busy boat mart on the river Han, we enquired for a boatman who came to the hospital quite incapacitated for his work in consequence of rheumatism in his arms and hands. He remained under treatment for several weeks. On leaving there was quite an outburst of crying among the patients, when they saw him so grieved to leave us; he returned home supplied with medicine and sufficiently cured to resume his work. The numerous boatmen of the place, hearing that we were from the hospital, anxiously sought for a look at us, and I can assure you we had no difficulty in hiring a boat; in fact we could have hired a good many had we wished to do so. The man was away burying his father, but all spoke of, what appeared to them, the wonderful cure, and told us how he was able to resume his work. In many ways did they show their appreciation of the good he had received. Many other cases of equal interest might be told, but this must suffice. When nearing home one of our coolies who has travelled much said, "Many times have I travelled the same *route*, and know well the character of the people, and I am surprised and delighted at their conduct towards you." Let us remember the words of Solomon: "If thou forbear to deliver them that are drawn unto death, and those that are ready to be slain; if thou sayest, Behold, we knew it not; doth not He that pondereth the heart consider it? and He that keepeth thy soul doth He not know it? and shall not He render to every man according to his works?"—*Central China Wesleyan Mission Prayer Union*.

An account, or even mention, of evangelistic work, finds no place in the Reports of Medical Missions of the Church of England in Seoul and Chemulpo.

A report of steady work in this direction comes from the L. M. S. Alice Memorial and Nethersole Hospitals, Hongkong. "Evangelistic effort and professional work proceed side by side in the Hospitals throughout the whole day; yet all is so arranged that neither in any sense interferes with the other." We like to think how mutually helpful the two departments of work are, the medical preparing the way for the evangelistic, while the latter takes up the task where the other leaves it and offers the only cure for the more deeply seated malady of a sin-sick soul; while both, as when evangelist and physician are combined in one person, are designed to bring a full salvation near to those who sit where the death shadow is only partially lifted, where only here and there the light of the glorious Gospel has shined.

It is good to read in the Report of the Medical Missionary Society of Canton that "visits in the homes have done much to overcome prejudice and strengthen confidence in Western medicine." This is the privilege of those who, not possessed of a knowledge of "Western medicine," can yet supplement the work of the medical missionary who, in China, is almost invariably overworked, and whose sphere must generally be confined to hospital and consulting room, though he may wish he could follow the Great Physician more closely, and mingle with the people in homes where he would be secure of an attentive hearing from those who already believe in his "works." This Medical Mission Report also tells of "instruction given to out-patients on each regular prescribing day, of Sabbath School, both distribution and private instruction in the homes of those interested." We subjoin a paragraph referring to the "two schools which" have been for years an interesting feature of evangelistic work in the Hospital :—

"The Hospital school has had an uninterrupted year of work. Although for reasons already mentioned the number of pupils during the summer months was less than in former years, yet the daily average attendance has been very good, and the progress in study most satisfactory. Week by week lessons have been heard, instruction in religious truth been given and steady advancement been made by those who in most cases were receiving their first lessons in regard to the Christian religion. The Sabbath afternoon prayer meetings have been exceedingly interesting and helpful. Five of the scholars have been admitted into the Church."

The workers in connexion with the American Presbyterian Church, Peking, speak sadly of "the usual callousness to appeals to other than material improvement," and regret that in spite of daily prayers and "much time spent in conversing with the patients as to their need of a Saviour no one has united with the Church from the patients during the year."

The Report of the Swatow Presbyterian Church of England Hospital contains a full account of evangelistic work done . . . Morning and evening services and reading classes for women and boys, in all six daily classes or services shared between the missionary ladies and native helpers, besides conversation in the wards and sales of Gospels, etc., by the colporteur. It is encouraging to read that a meeting for "examining and instructing applicants for baptism" is held on Sunday afternoons. Says the Report :—

"During the year about one hundred men and women applied for baptism. Some of these we suspect may be insincere, others we fear will yield to the force of village opinion when they go home, but some we have good reason to hope are both sincere, and by faith will stand out against all persecution."

"The classes and ward work are subsidiary to the preaching at the morning and evening services, and we have much reason to thank God for two so earnest and capable evangelists as the senior assistants. The Christian influence these two men have exerted on their fellow-countrymen in this region during the past twenty years must be deep and widespread."

Would that the number of such was larger! To quote again: "A number of old patients were baptized at the country chapels and two or three in the Hospital. It is encouraging to know that some of these had not applied for baptism here, and yet on going home had destroyed their idols and attended service at the nearest chapel." An extract from a letter written by one of the ladies of the Mission after visiting a country station will illustrate how the influence of the Hospital is multiplied. "The woman who was baptized had heard the doctrine in the Hospital when she was there with her son, who had his foot amputated. On their return home the husband was quite willing to listen, and he and a young son also became applicants. This younger son my husband did not baptize, but he had the pleasure of receiving the husband and wife, eldest son and little baby, all of one family, as well as another young man. We hope this family may be the means of bringing many others to worship, as their home is in a village where as yet there are no Christians."

This brings to mind again the need, so deeply felt where workers are few, of adequate "following up" of good work begun in hospitals. Happy indeed when patients are so truly convinced and so well instructed during their stay as to renounce their idols and to seek to know more of the truth, as in the case of those mentioned above. Yet not a few will feel sadly that opportunities made by medical work are lost, because no one is forthcoming to "take" them.

The workers of the Lao-ling Methodist New Connexion Medical Mission have been cheered alike by widespread and grateful appreciation of their work and also, better still, by results in the changed lives of former patients. To quote:—

"As in medical work so in religious work we find the best results in the wards. Here not much stress is laid upon preaching, rather do we trust to personal influence and conversation with the patients. To those whose diseases have required prolonged treatment systematic religious instruction has at their own request been given. All have listened willingly, and some eagerly, to the Gospel message. Instances could be given in which genuine conversion has evidently taken place, and we have since heard of three former patients whose changed lives on returning home can be distinctly traced to the religious influences of the hospital."

Thus from North and South, from stations here and there, comes news of the work of preaching the Gospel, whether by deed of healing or word of

mouth. Trial and triumph are always comingled as one takes a broad view of the field. The Gospel wins its way, though tired, discouraged workers sometimes forget to "lift up their eyes and look on the field" and to rejoice on others reaping, though they do not yet gather in themselves. Let such remember that whenever holy influence is brought to bear even upon those whose spiritual perception is small, the kingdom that comes not with observation is approaching.

M. A. P.



Medical and Surgical Progress.

A PLEA FOR CLINICAL RESEARCH.

(*Extracted from Mr. Jonathan Hutchinson's Annals of Surgery. Vol. VI, No. 21.*)

In vigorous terms and beautiful language WORDSWORTH has repudiated the idea that the laws of social morality and well-doing have been left to be discovered by the casuist and theologian—

“Believe it not;

The primal duties shine aloft—like stars;
The charities that soothe, and heal, and bless,

Are scattered at the feet of Man—like flowers.”

Although the suggestion may possibly seem strange from the pen of one by profession devoted to the pursuit of scientific knowledge, I may yet venture to admit that I have often thought that a similar assertion is, to some extent, true as regards the relation between common sense and experimental investigation. No one will deny that social-progress has been much indebted to moralists and political economists who have studied questions in detail, concerning which others had been content to accept instinctive feelings and general impressions. Far less is it possible to entertain other than a sentiment of reverent gratitude for the discoveries of the telescope, the microscope and other instruments of research.

We must not venture to follow WORDSWORTH in his distrust and almost dislike of science. There remains, however, I cannot but think, sound reason for protest against premature attempts on the part of the minute investigator to dominate the whole field of observation. It may still be doubted whether results of general outside observation, conducted with zeal and caution, are not obtainable more quickly, and sometimes

even more surely, than those for which we are indebted to the laboratory. It is not necessary to depreciate the one in order to exalt the other. In the present day enthusiasm for the one method has unduly cast the other into the shade. Especially has this been so in the science of medicine. The tendency has been to receive with premature confidence every little so-called discovery of the chemist or the bacteriologist, and to permit them in some instances to supersede, and in others to override, the conclusions deducible from common observation. The latter has accordingly been disparaged as a means of arriving at discoveries, and it has not been cultivated with the industry, zeal and caution which would naturally spring from a further faith in its methods. Now inasmuch as many of the most important problems of medicine are from their nature but little amenable to the exact methods of scientific investigation, it is surely to be regretted that any slur should be cast upon the only kind of research which is really hopeful.

“Common sense” is not frequently very unscientific, or rather it lacks scientific support, but there is no reason why on that account “science” should be permitted to thrust common observation wholly aside. I will endeavour to give some illustrations of what is meant.

The old-fashioned expression, “taken a chill,” implies probably a better conception of the causation of catarrhal maladies, including most pneumonias, capillary bronchitis, pleuritis, etc., than do the recondite terms of our modern pathologists. Our forefathers knew and recognised that the exposure of some part of the skin surface to cold or wet, or both, might, and very

frequently did, originate internal inflammations of a dangerous character. We in our refinements of pathological anatomy are too apt to forget their broad and yet very truthful view of the facts. We ignore the recognition of the real cause of one-half of human mortality in our zeal for the establishment of minute distinctions as to results. Nor, however detailed may our future knowledge become, shall we ever advance in practical matters much beyond the primal doctrine of our ancestors that it is dangerous to catch cold, and that independently of either diathesis or contagion a chill is a common cause of death.

In reference to the explanation of the details of the process of contagion microscopic investigation has of late years achieved much. Yet it may, I think, be fairly claimed that clinical observation has, in most departments, preceded it and that in many it might, if trusted and carefully pursued, lead us to beliefs at once more comprehensive and better balanced than those of the histologist. Most surely it was not left for KOCH and his followers to demonstrate to us the laws of the spread by contagion of tuberculous maladies. We knew long ago, as we know now, that consumption is occasionally communicated from one individual to another, but we believed such events to be rare, and we laid infinitely more stress upon the predisposing influences which favoured the development of the disease. Just in proportion as the discovery of the bacillus has by turning our attention to the prevention of contagion induced neglect of the far more important measures which look to the general health has it been a step in a backward direction. The bacillus may play an important part in the tuberculous process, but it is far from being the whole. It may be, and probably is, capable of transference from one person to another, but the conditions which favour its growth are of far more importance than the parasite itself, and all these might have been, and to a large

extent were, already known as the result of clinical, I had almost said of domestic, observation.

Our microscopists are now seeking with indefatigable zeal for special elements of contagion in various forms of chronic inflammation of the skin. Much success has already attended their efforts, and more may be looked for. No one more heartily applauds them than myself. We are told respecting rhino-scleroma, sycosis, eczema and a host of others, that for each there is its special parasite. I will by no means venture to exclaim, "Believe it not," but this I do dare to contend that clinical observation has already put forward laws which are inclusive of the whole results, and which for practical purposes afford us adequate guidance. It asserts, and it is able to illustrate by a thousand instances, that first almost all forms of the inflammatory process, however originated, are prone to be attended by the development of infective material, through the direct influence of which the process may be spread not only in adjacent but even in distant parts. It asserts, secondly, that this infective material let loose in the lymphatics, or in the blood, does not find its home haphazard, but shows a distinct preference for tissues similar to that in which it had its birth. The emigrant seeks a settlement in a country as much like that of his forefathers as he can find. Thus if perosteum be inflamed it will infect other bones, if a joint other joints, if a finger-nail other nails and so on. Under these two laws the phenomena of a very large group of aggressive chronic diseases may, I think, be explained. What the precise nature of the infective materies may be the clinician cannot say, but this is a matter only of detail. The really important thing is to recognise its reality and take our measures accordingly. We may guess that it is not the same in all cases, that in some it is as much a stranger and a parasite as a thistle which has sprung up in a farmer's field and threatens to spread about its seeds,

whilst in other its origin may be very different.

The human body is not inanimate earth upon which nothing can originate unless planted. It consists rather of an infinite aggregation of living particles capable of marvellous transformations, and respecting the life history of which we as yet possess but the very beginning of knowledge. It may be that something which at first sight is very like spontaneous origin of organisms is not only possible but an every-day occurrence. There are many facts familiar to the careful observer which would favour the suspicion that contagia, which seem to exhibit almost specific properties, may yet originate *de novo* in its tissues.

I have often felt surprise that no one has as yet discovered the microbe of cicatricial keloid. Not that I in the least believe there is one, but its laws of growth and certain facts as to its infectivity place it in apparently close relationship with maladies which have been so explained. Clearly it can grow by its own infection, and often, indeed usually, attains dimensions far exceeding those of the scar in which it originates. Sometimes we seem to have evidence that one growth may be the means of inducing others at distant parts, and in this we have a fact which can be explained only by supposing that it sheds germinal matter into the blood. Thus in a case which I long ago published a man who had keloid follow the scar of a scald, subsequently had nodules of keloid develop in some old scars left by cupping. I admit that this infection of distant parts is not very common, but I suspect that it is more frequent than is supposed, and that many cases of multiple keloid are to be so explained. I have just seen a little boy in whom in infancy keloid developed in his vaccination scars. Three or four years later he was severely burned on one forearm, and the result has been the formation of large keloid patches in the scars.

Those after vaccination still persist, and it may be suspected that they furnished material which infected the more recent scars. There can, of course, be no infection unless the patient have other scars, for he has otherwise no suitable soil in which the germs may flourish. What is the nature of such germs? Probably simply representative of the tissues in which they originate endowed with all their qualities.

I might, without much difficulty, find a good many examples of loss to the practical knowledge of disease by an overweening confidence in instrumental methods of research, and a corresponding distrust of opinions based only on observation of purely clinical facts. The tendency of the day is to expect all truth from the microscope and the test tube, and to allow to any announcement of fact from the laboratory a degree of confidence which is refused to the verdicts given on circumstantial evidence. In spite of this it remains as true as ever it was that but a small portion of the problems with which the physician has to deal can be decided by such tests. The greater part need for their solution the careful and very detailed collection of facts of another kind.

I feel obliged to write that there is much reason to believe that the discovery of urate of soda in the blood in cases of gout has been the means of injury to clinical knowledge. Physicians of a former century entertained wider and more correct views as to the real nature of gout than we do now. The discovery of what was believed to be a trustworthy chemical test appeared to give a scientific basis to diagnosis, and was eagerly accepted.

Urate of soda was held to be the one and sole cause of all gouty phenomena, and no conditions in which it was not present were allowed to receive the name of gout. It was thought that we could now discriminate with certainty between gout and rheumatism, and all that was further needed was to find some chemical salt or acid which

should be held accountable for the latter. Physicians from the time of HERBERDIN till that of GARROD had thought that the two diseases were capable of the most intimate admixture; that under the laws of inheritance they were, to some extent, transmutable, and that the children of the gouty often realized their heritage in the form of rheumatism. They thought that rheumatic gout was really a fixed disease, and that it was capable of a great variety of transformations. In a word, they took cognisance of the clinical complexity of the phenomena which observation revealed to them and dealt with them accordingly. Their clinical knowledge was not perfect in its detail, but in its main features it was probably much nearer the truth than the chemical theories which during the last quarter of a century have, with but little protest, been permitted to rule professional opinion. I do not wish to underrate the importance of Sir ALFRED GARROD's observation, but I must yet doubt whether urate of soda is the cause of one-tenth or one-twentieth of the symptoms which occur in direct or indirect association with gout.

It is remarkable, and in one sense disappointing, to note how little has been the outcome, as regards practical medicine and surgery, of KOCH's discovery of the tubercle bacillus. Indeed, as in the case of the urate of soda hypothesis of gout, it might easily be argued that it has in some ways damaged our practice. It has put us to some extent on a wrong scent, and has, for a time, induced a partial neglect of the dietetic and climatic measures which still remain by far the most important means of combating scrofula. We knew before the days of the bacillus that pulmonary phthisis was occasionally, though but rarely, spread by contagion. We knew well that tubercular processes were capable, in the patient, of advancing by infection, as, for instance, in the well recognised example of tubercle of the testis inducing widespread disease of the genito-urinary organs. Our treatment

was, to some extent, based upon the creed of infection. I admit that we act much more vigorously now. Many a patient now has his neck-glands, or it may be one or both of his testes, excised instead of being sent on a sea-voyage. This zeal for local treatment may be in itself unimpeachable, but if it has, as may be plausibly expected, been allowed to induce neglect of old-fashioned constitutional measures, it has possibly been allowed to supplant that which was really more trustworthy than itself. It is probably still the truth that predisposition—derived from parents, or induced by personal exposure to debilitating influences—is of vastly more importance than local infection, and that the latter will usually come to nothing if the former be non-existent. There is real danger that, under the influence of contagion-doctrines, we may leave undone by far the more important part of our work.

Turning to the subject of leprosy I have to urge a similar charge and to insist yet more strongly on its importance. The discovery of the bacillus has rehabilitated the doctrine of contagion which, on clinical evidence of the most cogent character, was fast losing ground. The cry is now, "There is a bacillus, therefore it must be contagious."

Thus one little item of what is held to be "scientific evidence" is allowed to outweigh or to wholly set aside a vast array of circumstantial proof. The disease has died out in England and the greater part of Europe, in spite of the fact that there never was any systematic isolation, and that into the leper houses themselves many patients not lepers were admitted. It could not possibly have ceased so if it had been contagious. Leper patients may now come to reside in England or the United States—they have done so by dozens—and although no precautions are observed the disease never spreads. The nurses and attendants at leper hospitals never catch it. Two English commissions have carefully sifted

the evidence—one of them in India itself, and with the advantage of Indian experts—and have reported strongly against the idea of contagion. In spite, however, of facts such as these the majority of the profession are content to accept the existence of a bacillus (proved only, as yet, in certain stages and under certain conditions) as conclusive demonstration that the disease is caused by contagion, and contagion only. Two evils may possibly result from this. In the first place cruel laws may be passed enforcing an isolation which is possibly wholly needless; and in the second, and probably more important, attention may be diverted from the right direction of search after the real cause.

The doctrine of a pre-cancerous stage of cancer is, I feel sure, of the very first importance in reference to the saving of human life. Once let this doctrine be fully and widely accepted by the profession, and the mortality from cancer of the lip, tongue, penis and indeed of the surface of the body generally will cease. It is scarcely too much to assert that all the cases which end fatally do so because the diagnosis is missed in the earlier stages. Yet I am sorry to say that in this matter our microscopic pathologists not only give us no help but actually hinder. They insist that the microscope can recognise cancer, and that the disease is not cancer if it cannot do so.

The discovery by Dr. SNOW of the part taken by water in the diffusion of cholera was entirely the outcome of circumstantial evidence. So far as preventive measures were concerned it covered the whole ground, and the subsequent observations of microscopists have added nothing of importance. The same assertion may be made as to diphtheria. It was abundantly evident to most who had cared to examine the facts that this disease was in all its forms contagious, and that isolation, especially as regards young persons and

schools, was the one, and almost the sole, means of preventing it from spreading. The discovery of LOEFFLER's bacillus has perhaps added definiteness to our knowledge, and may be thought to have strengthened the hands of contagionists. Clinical observers had, however, fully anticipated it, and it may be asserted that the creed which they had suggested was in some important aspects a much sounder and safer one than that which is now becoming prevalent. Practical men, eager to repose on what they count scientific demonstration (that is, something seen only by the aid of a microscope) now search painfully for the bacillus, or send up a piece of membrane to London and receive by telegram a diagnosis from which there is no appeal. The clinician, on the other hand, cares little or nothing whether the bacillus be present or not, but treats all inflammatory sorethroats as possible sources of contagion. The more virulent the case the greater the risk, but on no account, even in the mildest cases, will he forego precautions. If misplaced confidence in a negative diagnosis by the microscope should in the future lead to the neglect of such precautions then it is quite possible that LOEFFLER's discovery may sometimes prove injurious rather than otherwise to the public welfare.

Not only is it the fact that the discovery of vaccination as a means of preventing small-pox was the result of observation unaided by what is now known as science, but it has happened in these latter days that its value is assailed by some who claim to fight under the banner of science, and that its defence rests with those who can trust to common-place observation.

It is not my role to disparage, in the least, microscopic or chemical observation, and I most gladly acknowledge that in various directions, and especially in the hands of M. PASTEUR, experiments of a scientific character have resulted in beneficent discoveries. In thankfully admitting

this, however, I may be permitted to add that JENNER's observation had pointed the way to all that has since been attained in this direction, and to say, further, that the road he took still remains one of the best and most direct towards the goal we all aim at. It is not my wish, were it in the least degree possible, which happily it is not, to discourage strictly scientific work in reference to pathogeny. I wish rather to protest against the feeling of distrust, almost of contempt, for conclusions based merely on circumstantial evidence which is at present prevalent. My argument is that, as regards nine-tenths of our problems, such evidence is all that we can possibly get, and that the conditions are frequent under which it is more trustworthy than that which it is now the custom to offer us in its stead. So far from its being true, as some seem to imagine, that the clinical method is an idle haphazard and conjectural one, it is probably the fact that its methods honestly pursued require at least as much patient perseverance as those of the laboratory, and that they lead to more trustworthy results.

Some of my readers may possibly be thinking that I am pursuing a needless argument, and that in reality there is no risk of neglect of clinical methods of research. It may be thought that we at least equal our forefathers in zeal for bedside observation. I readily admit that many and able armour-bearers are still to be found in the clinical camp. The fact, however, remains, and it is surely important that, as compared with the more minute methods, clinical investigation is at present under a cloud. There is no lack of zeal as regards the operative treatment of disease; in this respect, indeed, clinical surgery is most prosperous. What is wanted, if I may be permitted to say so, is more industry and more patience and more care in Case-collecting and Case-illustration and Case-comparison.

THE COOL BATH TREATMENT OF ENTERIC FEVER.

We take the following rules from the abstract of a paper in the *B. M. J.* :—

1. A temperature of 102.2 in the rectum calls for a bath, and it must not, as a rule, be permitted to rise higher without giving the bath, unless the patient is in a sound sleep.

2. The bath, long enough for the patient to be at full length in, is brought close to the bedside, and the patient carefully lifted in and out in the horizontal posture.

3. Half an ounce or 1 ounce of old pale brandy in 2 or 3 ounces of soda or aerated lime water to be given first (in case of adult) [the utility of this is very doubtful.—*Ed. Med. Mis. Mag.*]

4. The patient must always pass water before being put in the bath.]

5. The patient to be immersed up to the neck; the head to be constantly sponged; and the chest and extremities, not abdomen, to be gently rubbed by an attendant.

6. The first bath to be given at 90° F. or 85°, and cooled down, by adding cold water, to 75° or 70°. If the patient bears it well subsequent baths may be given at 80°, and cooled down to 70°. The cold water is poured over the patient's head and chest.

7. Average duration of bath, 10 minutes; some say until patient begins to shiver; but if he begins to feel cold or gets uneasy the bath must be cut short. Where a patient is nervous, or bears the cool baths badly, he may be kept in tepid ones at 87° for 15, 20 or 30 minutes; the more prolonged immersion producing the desired effect.

8. Lift the patient carefully on to a couple of large soft bath towels laid over a mackintosh sheet, and rub him dry briskly (except the abdomen, which dry gently), envelop him in a warm blanket and put him in bed, covering lightly, and give him

a cup of warm coffee and milk, or peptonised cocoa and milk.

9. Half an hour after take the temperature, in the rectum preferably, when it should be 2° or 3° lower.

10. Take the temperature every 3 hours, and as soon as it again rises to 102.2 F. repeat the bath, unless he is sleeping, when as a rule he must not be disturbed, even if the temperature rise to 104°, but the bath deferred till he awakes.

11. Usually a bath is indicated every 6 hours. Sometimes, however, during the fastigium the pyrexia is so obstinate and uncontrollable as to call for a bath every 3 or 2 hours.

12. During the night baths are seldom called for, except by an extremely high temperature.

13. In case the bath lowers the temperature only 1° or less, or only for a very short interval, it becomes necessary to lower its temperature to 66° (cool bath), or even 45° (cold), and lumps of ice may be put into the bath to cool it down with perfect safety.

14. If intestinal haemorrhage occur baths must be discontinued. The only absolute contra-indications for this treatment are peritonitis, perforation, haemorrhage and the advanced cardiac weakness sometimes observed in the later stages of the disease. BROADBENT considered that neither albuminuria nor pulmonary complications were prohibitive, and stated that he had seen albumen disappear from the urine, and pulmonary complications cease after a single bath.

THE APPPOSITION OF PERITONEUM TO PERITONEUM.

In the *B. M. J.* for January 5, Mr. GREIG SMITH has an interesting and important paper calling in question the soundness of the surgical rule of peritoneum to peritoneum apposition. After narrating how the exigencies of rapid operating compelled him,

in the first instance, frequently, to neglect this axiom, with the after result of finding that adhesions between bowel and raw surface were exceedingly firm, he writes: "The practical outcome of this has been that where I want temporary drainage with loose adhesions and mobile bowel—as in temporary enterostomy—I suture parietal peritoneum, bowel and skin; but where I desire firm, permanent and intimate adhesion, with no mobility of bowel on parietes—as in coelio-colostomy—I implant bowel directly on raw surface, and if this raw surface is small, as it is in thin subjects, I increase it by unfolding or peeling from the parietes more peritoneum, and turning its raw, not its serous, surface into the bowel." He then gives evidence to prove that fibro-serous adhesions are much stronger than sero-serous, and continues: "Whenever possible one raw surface is implanted in peritoneum. Thus in hysterectomy by the extra peritoneal method the peritoneum is not attached by its serous surface to the serosa covering the pedicle, but the raw surface of the peritoneum is opened up and laid over the pedicle. In cholecystotomy the gall bladder is surrounded by the raw surface of the detached peritoneum, not gathered in and sutured, but purposely opened up and spread out. It is easy enough, if it tends to remain open, to close the fistula without entering the general cavity. In colostomy by coeliotomy immovable fixation of the gut on the parietes, preventing both indrawing and prolapse, is best got by direct implantation of the gut on the parietal incision, supplemented, if necessary, by outfolding of the detached peritoneum. And in every case where I desire to get rapid and strong fixation of hollow viscus, cyst or abscess wall, pedicle or solid growth to the abdominal parietes, I always now apply not serous to serous surface but either serous to raw surface or raw to raw. The parietal peritoneum is either turned out, so that its raw surface lies in contact with the serosa

to be attached, or the serosa of the organ is peeled off, or both are done. The practical application of these principles is as wide as abdominal surgery, and includes not only results to be encouraged, but results to be avoided. Where it is desired to secure quick, strong and permanent union sero-fibrous apposition is better than sero-serous. Where the union sought need not be strong and is desired to be only temporary sero-serous apposition may be adopted. Fibro-fibrous apposition, while perhaps as good as sero-serous, is not in my experience so good as sero-fibrous. Sinister results, which we seek to avoid, arise when we leave raw surfaces to which intestines may adhere and cause obstruction. To cover such a surface by peritoneum would, according to published statistics, save nearly 2 per cent of the deaths after abdominal operations."

THE CONTROL OF HÆMORRHAGE IN AMPUTATION AT THE SHOULDER.

In the *B. M. J.* for February 23 Mr. CLEMENT LUCAS thus describes his method of controlling the main artery on the inner flap of amputation at the shoulder without the aid of an assistant: "The deltoid flap having been raised and the head of the humerus disarticulated the knife is carried down on the inner side of the bone somewhat below the neck. The left hand now grasps the inner flap between the thumb and fingers so as to compress the artery, the thumb being in contact with the raw surface and the fingers outside. Held in this way the inner flap is completed by the knife without hæmorrhage; the surgeon retaining his hold until the vessel is secured with forceps."

THE AFTER-TREATMENT OF TONGUE-EXCISIONS.

By HENRY T. BUTLIN, F R.C.S. (LONDON.)

The after-treatment of operations on the tongue should be chiefly directed to: (1) maintaining the wound in the mouth as

aseptic as possible; (2) diminishing the tendency of the wound-discharges to pass down the air-passages; (3) preventing food from passing down the trachea into the lungs.

The first indication is best fulfilled by the frequent use of powdered iodoform to the mouth wound. As soon as the operation is over, and before the patient is put back to bed, the surface of the fresh wound is dusted with powdered iodoform. And, for a week or ten days, iodoform is blown on to the surface of the wound by means of a proper insufflator. In addition, the patient may use a mouth-wash of CONDY'S fluid or weak carbolic solution to help to cleanse the interior of the mouth of the fluids which collect there.

The second indication requires that the patient's head should be kept low, and that he should lie on one side. BUTLIN only allows one small pillow and insists that the patient should lie well over on the side from which the greatest amount of tongue has been removed. The discharges then have a tendency to sink into the cheek, and are frequently washed out or allowed to run out, and there is thus the least possible inclination of discharges to sink down toward the back of the mouth and larynx.

The feeding of these patients needs very great attention. When only half of the tongue—whether a lateral half or the front half—or two-thirds has been removed liquids can generally easily be taken on the day following the operation from a feeder with a spout, provided a piece of India-rubber tubing, three or four inches long, be fixed on to the spout. If the right half of the tongue has been removed the patient should lie over on the left side during feeding, so that the food is kept as far as possible away from the wound, and passes over the parts which have been least interfered with.

When the whole of the tongue has been removed the difficulty of swallowing is much greater, and many days may elapse before the patient acquires the knack of

swallowing liquids without permitting a small quantity to pass down the air-tubes. During the first forty-eight hours these patients are fed through the rectum with nutrient enemata. At the end of that period the patient may make a first attempt to swallow a little liquid, and water should be chosen for the experiment, because the entrance of a little water into the trachea is seldom followed by any serious consequences. Milk and beef-tea are more dangerous; they hang about the air-tubes, are difficult to get rid of, and are very prone to undergo rapid decomposition and occasion the much-dreaded swallowing pneumonia (Schluck-pneumonie). If the experiment is successful other liquids may be tried, and the problem of feeding is really overcome. But if there is any difficulty the patient, as long as may be necessary, should be fed through a tube. No instrument is so good for this purpose as a black bulbous catheter, about No. 9 or 10, attached to a long piece of India-rubber tubing, to the other end of which a small glass funnel is fixed.

The throat is first sprayed with a 3 or 4 per cent. solution of cocaine; the tubing is clamped with forceps just above the attachment of the catheter, and the funnel and tubing are filled down to the clamp forceps with warm food. The catheter is very gently passed down the pharynx, and hitches at the posterior border of the larynx. The patient is directed to swallow, and as he does so the catheter is easily passed on into the œsophagus. For the moment discomfort is created, and the patient often struggles. He is directed to close his mouth, and no attempt is made to pass the catheter farther down for half a minute or longer. Then it is slowly and gently passed down to a distance of about eleven inches from the teeth. When the annoyance of the presence of the catheter has ceased the clamp is removed, and the food is allowed to run slowly down into the stomach. If there is an inclination to

regurgitation or to cough the descent of liquid is instantly arrested by pressing on the tubing with the finger and thumb, and the nurse lowers the funnel until the dangerous moment has passed. By attention to these details a pint or a pint and a half of liquid may easily be introduced into the stomach without danger. Before removing the catheter the funnel is raised higher up, so as to get rid of the contents of the tube; and during the actual removal of the catheter the tubing is kept tightly pressed between the finger and thumb in order to prevent the entrance of even a few drops into the larynx. Patients are often so satisfied with this method of feeding that they have sometimes insisted on being fed through a tube for a much longer period than was really necessary.

Results.—The reporter has removed at least half the tongue in forty-six consecutive cases with one fatal result. The great majority of the cases were, of course, uncomplicated, that is, they were not complicated by the removal of lymphatic glands or of ligature of the lingual artery. But they were performed on persons varying in age from thirty-three to seventy-five years, and nineteen of them were performed on patients over sixty years of age. Some of the patients were suffering from organic disease of internal organs, and some of the operations were very severe. They may be thus classified:—

(1.) Uncomplicated operations, 30; removal of one lateral half of the tongue, 13; removal of anterior half or two-thirds, 12 (in several of these the floor of the mouth was at the same time freely dealt with); removal of the whole tongue, 5.

These uncomplicated operations were recovered from in almost every instance without any drawback. One patient, forty-six years old, had an attack of secondary hæmorrhage from the right lingual artery eleven days after the removal of the whole tongue. An anæsthetic was administered, and the artery tied in the floor of the

mouth, after which he made a steady recovery.

In an old man, aged seventy-two, severe bleeding took place on the day of the operation, not from the tongue but apparently from the back of the throat. After some time the hæmorrhage ceased, and he slowly recovered, but his recovery was seriously retarded by the loss of blood.

(2.) Complicated operations, 16; removal of half of the tongue and lymphatic glands, 2; removal of the whole of the tongue and lymphatic glands, 1; removal of half of the tongue, ligature of the lingual artery in the neck, removal of glands, &c., 10; removal of the whole tongue, ligature of the lingual artery in the neck, &c., 3.

These complicated operations were for the most part necovered from with greater difficulty than the uncomplicated operations. Infiltration took place from the wound in the mouth into the deeper wound in several of them, and in one case in which this occurred the patient was for two or three weeks seriously ill. Since then BUTLIN has almost invariably drained the lower wound for the first few days after the operation, a precaution which he had seldom previously taken.

In one of these patients, fifty-one years old, hæmorrhage occurred six days after the operation from a deep cavity which had been made in the floor of the mouth, and recurred during three or four days. It was ultimately arrested by clearing out the wound to the bottom and stuffing it with iodoform gauze. And in a man, aged forty-nine, secondary hæmorrhage set in from the wound in the neck nine days after the operation. The hæmorrhage was arrested also by plugging, and the patient slowly recovered.

The fatal case was that of a man, aged seventy-one, who suffered from an epithelioma of the anterior portion of the left half of the tongue and associated enlarged glands. In the course of a day or two the wound in the neck was foul, apparently

from the sinking down of discharges into it from the mouth; it had not been drained. The patient had rigors and high temperature. He appeared to improve for a while after the condition of the wound had been bettered, but he finally died five weeks after the operation.—From the *British Medical Journal*, April 14th, 1894.

THE INDIAN MEDICAL CONGRESS.

Obstetrics and Gynæcology.

Dec. 24th, 1894.

Presidential Address on the Influence of Race and Climate upon Obstetrics and Gynæcology in India.

[Surgeon-Major H. PEERS DIMMOCK, Professor of Midwifery, Grant Medical College, Bombay, delivered his presidential address. After a preamble dealing with the importance of the subject and the difficulties incidental to its treatment in an Oriental country he proceeded to the consideration of puerperal fever, saying:—]

“Since Professor SEMODAELEWIS first placed us in possession of the axioms of puerperal fever there has been accumulated a mass of evidence to demonstrate their truths, and fresh knowledge had been added to them, especially by the discovery of the antiseptic system by LISTER. But though the ideas of all authorities are fairly well defined there are still many effects and conditions of puerperal fever and points of difference that are hard to reconcile. This is especially the case in a country like India, which teems with forms of pyrexial diseases that are liable to complicate the pregnant and puerperal states. To indicate all forms of puerperal fever as puerperal septicæmia, whatever the infective cause, and however much the symptoms may vary, is alone sufficiently confusing when we are brought face to face with their actual protean clinical facts; and on the other hand, to seek to differentiate each and every kind of puerperal fever according to its features, whether of cause or effect, would

lead us into an interminable phraseology that would be too awkward for any practical purpose. The old familiar term "puerperal fever" as a main distinctive indication is rendered sufficient for all purposes by the affix of a descriptive adjective for the special condition or cause associated with the pyrexia of the puerperium, which after all is the generic meaning of puerperal fever. Thus the words 'traumatic, septicæmic and pyæmic puerperal fever,' would describe fairly well the form of puerperal pyrexia that was associated with traumatism, septicæmia or pyæmia. Any local effects can, at the same time, be described as complications, and we should thus have a designation like 'traumatic puerperal fever with pyo-metritis' and so on. To eliminate the special characters and peculiarities of these and other complex puerperal fevers we require a very extensive knowledge of their clinical features, and in India we are confronted with so many kinds of the fever type of disease that such an inquiry is sure to be full of immensely interesting and intricate possibilities. Clinical observation and deductions therefrom are always most attractive, and have been naturally the principal methods of elucidation of disease throughout all time of medical knowledge. They demand the first attention of the physician, and now-a-days, waited on by pathology and its youthful handmaid bacteriology, they are yielding most fruitful results. In these rapidly progressive days we are continually on the outlook for some fresh means of divining the actual causes and conditions of disease, and those occurring in the pregnant state and the puerperium are so environed by their own peculiar accompaniments that there is a separate and special field for the study of them, both clinically and pathologically. In a research into the causes and effects of puerperal fever in India we are confronted not alone with special disease entities, but also with the many conditions peculiar to the country itself—of season and

meteorological events, of race, of surroundings, of habits, of intercurrent disease and of the preliminary effects of the pregnant state under such conditions, in all of which I can only suggest what a large field there is for philosophical, thoughtful, scientific and useful inquiry, especially to those members of the profession who actually practise among the people and are intimate by race association with their modes of life and other influences. In a tropical climate the main influence would, of course, be that of the high temperature of the air, by which all developments and changes are brought about with a greater rapidity, so that the tissues become less stable, less hardy, and so tend to disintegrate quickly when once a rift is opened in their continuity. The extreme changes of intense dry stimulating heat in the summer and of a depressing heat that comes with the onset of the monsoons present aspects of variation, apart even from acclimatisation, in the organisms of all who are subject to them, and still more of those whose temperaments are liable to an easy divarication of the physiological equilibrium, either towards depression or exaltation. As examples of the differences of disease types under such circumstances may be taken the sharp attacks of fever which occur in the drier seasons of the year and the low forms of continued fever and malarious cachexia with engorgement of the abdominal viscera, especially of the spleen, such as take place in humid states of the atmosphere and damp climates. Frequently the slow development of malarious cachexia produces in the pregnant woman a form of pernicious malarious anæmia, which is characterised towards the end by intense anæmia, œdema and an enlarged spleen and liver, for the sluggish circulation and nervous debility encourage congestion of the organs. Race may show its influence in the various tendencies that are developed out of evolutionary characteristics, as, for instance, the neurotic type, rendering the woman more

susceptible of nervous impressions and reactions, often altering the characters of disease by superadded nervous phenomena, such as high temperature quickly subsiding. Habits of food, of drink and of luxury are worthy of reflective consideration, and it may be accepted as a fact that pregnant women whose food is of a vegetable and non-stimulating kind will have less stamina in enduring prolonged pain and exhaustion, but will recover more quickly from ordinary trials than those whose food is of a more generous description, while again the latter will be more liable to inflammatory reactions and rapid tissue changes, such as sloughing from traumatic injury. The surroundings of pregnant and puerperal women are manifold in their effects, and include those of the room, the house, the village and the town; septicæmic, zymotic and malarious puerperal fevers being the most likely outcome of dangers from these sources.

“I have had the usual experience of most inquirers in being baffled at the outset by forms of puerperal fever that I have had to deal with in India, and what impressed me most in the first instance with some of the cases was their unusual and surprising resistance to rigid antiseptic and aseptic precautions. A study of a series of temperature charts and the effects of various treatments on the temperature gave the true line of explanation. When once the clue was given the opening of some of the hidden processes was shown, so that I venture to tabulate certain forms of complex fever as follows:—

1. Malarious intermittent puerperal fevers.
(L) quotidian, (B) tertian, (Y) quartan.
2. Malarious remittent puerperal fevers.
3. Thermic do. do.
4. Dysenteric do. do.
5. Syphilitic do. do.

“I have no doubt that others will be added to their numbers as the science of medicine progresses, and wrests from the chaos of uncertainty the many forms of Indian fevers. The protozoic causes of

these fevers may develop in the pre-pregnant or the pregnant state, and be carried on into the puerperal state to be further impressed with a septicæmic pyrexial element, which is the result of the condition of the tissues and systems of the puerperal patient, rendering the unusual secretions and excretions more liable to the action of infective agents; or these causes may be latent in the system, manifesting no symptoms until they are excited to action by the onset of labour or roused to a more powerful influence by a septicæmic pyrexia. To deal with the group of the malarious forms of puerperal fever I submit cases with their accompanying charts. Many of you may be familiar with an experience that pregnant patients in this country who contract malarious fever, or whose systems are inoculated with its organisms, are very resistant to treatment for malarial fever or cachexia, either because the blood and tissues of the pregnant women are very retentive or reproductive of the disease factors, or because they are specially vulnerable to, and ineffective in, repelling their ravages. How often it happens that a pregnant woman suffering from malarious fever is treated by all the known methods, which produce no yielding of the fever for some time, and when the pyrexia runs high miscarriage is sooner or later brought about. The quinine may here be wrongly blamed for the mishap, which was in reality due to the overheated blood current and to the poisons circulating in it, and I have elsewhere protested against this shibboleth of the objection to use quinine in doses that are adequate for the control of the disease. At the same time we must not forget that sometimes malarial fever is not affected by quinine, and that the system may also be inoculated with previous treatment by that drug, so that it fails to give the expected result. It may be some days even before an ordinary attack of ague in a pregnant woman can be controlled, and if the case is allowed to go on without treatment the disease gets such a grip of the

patient as to be uncontrollable, and if labour or miscarriage results an additional puerperal septicæmia is an inevitable result. We are all familiar with the sudden appearance of malarious fever coincidently with a severe shock to the system, such as a fracture of a bone, the passage of a catheter, or an overwhelming emotion; recollecting that the dilatation of the os uteri is often accompanied by a rigor, I have attributed the sudden accession of a high temperature at the commencement of labour to a disturbance of latent malarious poison by the vascular, nervous, and tissue changes wrought by the mechanical process of dilatation. It is difficult to account in any other way for the sudden appearance of these fevers at such crises, when they have not been preceded by any signs of a taint lurking in the body; and I believe that the organisms are really latent, and that their sudden activity is because the balance of nervous control is disturbed by the advent of labour, the vitality of the cells and leucocytes are diminished, and their ranks are thereby thrown open to the invaders, because the reflex irritation to the nervous centres causes through the trophic nerves changes in the metabolism of the body and through the sympathetic nerves changes in the circulation which facilitate such morbid processes. It is the same with malarious fevers that develop after labour, in association apparently with the stimulus to the plasmodia of slight or severe puerperal septicæmic pyrexia, and in these instances the puerperal fever will be established with the thread of malarious fever running through it and giving a distinctive character to the temperature record, for the treatment of which complex condition it is necessary to combine methods applicable to both the diseases. Further, whenever malarial fever is developed in the puerpera there is a liability to what may be called an auto-genetic form of septicæmia as a result of the high temperature of the malarial fever, for the lochial secretions decompose rapidly

within the genital cavity, and their poisons are absorbed into the system, so as to produce the usual septicæmic effects in addition to those of malaria, thus causing a continuance of pyrexia during the intervals that would be remissions of the malarial fever, and exaggerating the high temperature of the pyrexial stage of the malarious attack. Very high and alarming temperatures are developed in this way. Again, puerperal women who have malarial cachexia may have progressed favourably even beyond the first week, when they expose themselves to a chill, and this is followed by the typical phases of the rigor, of the pyrexia and sweating stages of ague. The lochia become offensive, the temperature is continuously high, and there is an intermittent recurrence of the ague and increased pyrexia. It takes several, sometimes many, days before recovery is brought about, while if proper measures are not adopted the case may end fatally. In all these cases, associated with malaria of whatever kind, we have not only general effects to deal with, but also those local effects that are inevitably associated with the traumatism of labour. The lowered vitality of the tissues makes them very prone to take on a sloughing or even gangrenous character, and such conditions are not only resistant to repair and will heal slowly, but add a further and serious danger to the case from a multiplication of poisonous agents. If no treatment of the constitutional state is adopted their ravages will increase to a terrible extent, so that I have seen cases of malarious cachexia in the puerpera where the genital passages have been in a gangrenous state throughout their whole area; consequently when artificial traumatism is produced by the use of instruments particular precautions are necessary to guard against such effects, and, although there may be no apparent symptoms, most rigid attention should be paid to the local antiseptic treatment. Another effect of malarious cachexia and of malarious fever during pregnancy is to

cause a placentitis, from which the placenta becomes adherent, and so adds a further danger to the case at labour time. The shock of manual detachment may set up the pyrexia of malaria, or there may be infection from without by the operation. Such patients often complain of excessive tenderness over the uterus during pregnancy, which is no doubt due to the inflammation that is going on. Another effect of malaria in the puerperium is to produce intense neuralgia of some of the sexual organs. It may be the uterus that is thus affected, in which case it is probably caused by some inflammation of the nerve filaments communicated from a placentitis, or an actual primary neuritis of malarial origin, and the patient may suffer great pain, especially in connexion with the after-pains. I have found the uterus in these patients to be excessively tender, and the condition has mostly yielded at once to quinine and anti-neuralgic drugs. I can recall one case of acute neuralgia of the ovary which followed a miscarriage. The patient did well in all respects, except that at a regular hour every afternoon she suffered from acute agonising pain in the left ovarian region. It yielded at once to large doses of quinine. Post-partum hæmorrhage is also very likely to occur, mostly from the effects of the placentitis, but also in consequence of the state of the blood, of heightened blood-pressure and of the defective contractile power of the uterine muscular tissue. Diarrhœa is a frequent occurrence, and is of great importance. In all conditions of health or disease in people living in India, whether native or acclimatised, there is a primary climatic potentiality towards diarrhœa. A chill, an irritant, or disease are likely to be accompanied by it in ordinary individuals, and in puerperal fever particularly this natural tendency is exaggerated by the secondary morbid and derivative tendency of the system to relieve itself of the toxæmia through the mucous membrane of the intestines. Accordingly the usual dose of

castor oil will frequently start a severe diarrhœa, and sometimes almost choleraic symptoms are caused by what seems a small cause. Rheumatism is an occasional complication; the connexion between rheumatism and malaria is outside the present subject, so I will not discuss it. Mania is also a not infrequent sequel, and has partly to do with the state of health and partly with the high temperature. The higher the temperature the more likely are the psychological centres of the brain to be injured and disorders connected with them to follow. The fœtus is, as a rule, not particularly affected, except in nutrition, and so suffers from fever at birth only in occasional cases, and this is probably due to the resistant and destructive power of the placental structures, which thus guard the entry of the foetal area from deleterious matters. A similar result occurs in some cases of syphilis contracted during pregnancy."

[Surgeon-Major DIMMOCK then quoted cases of various forms of malarious puerperal fevers with their treatment, laying special stress on the point that quinine should be administered hypodermically in order to avoid the effect upon the digestive tract. He continued:—]

"The next series of puerperal fevers is that of the dysenteric form, which arises in connexion with a true dysenteric attack. The dysentery itself generally originates during pregnancy, either at full term or earlier. In the former labour and in the latter case abortion or miscarriage are very likely to occur, and so we have a puerperal condition with the dangerous concomitant of very poisonous alvine discharges. Infection of the genital passages from these produces an extraordinary disease of the puerperal fever type.

Dysentery itself is very obstinate in pregnant women, and there are no doubt turgescence of the mucous membranes and changes in the circulation which make the disease persistent. It is also desperately resistant to remedies, so that a dysentery

of an acute form in a woman near the end of pregnancy is peculiarly dangerous in this respect, as well as from the further risks of exciting premature confinement and of following up its primary havoc by an infection of the system with the fœcal toxins. The most careful treatment often fails to prevent these consequences, and sometimes, when the case has taken a favourable turn, it is liable to relapse. Much may be accomplished by repeated large doses of ipecacuanha, opiates, sedatives and antiseptics internally and externally; ipecacuanha is sometimes very well borne, so that I have been able to give thirty grains twice a day. No treatment is effective unless the food is absolutely unirritating, and peptonised milk and lime water are the only diet that serves the purpose. I have included an example of another series of cases, those of the syphilitic, because I have found peculiar results in women who are strongly tainted with the specific disease.

Case 7. M. M., aged twenty, Hindu, para, admitted in labour on April 26th, 1894, and in consequence of a tedious second stage was delivered by forceps on the morning of the 27th. There had been no complication of pregnancy, but the patient had appearances on her body which indicated syphilis. On admission the temperature was 102.5. F. and the pyrexia continued after delivery. The case was treated antiseptically for simple septicæmia and somewhat improved, but again relapsed. On the twelfth day of the disease iodide of potassium and santolin powder were given, with a gradual improvement, but the patient still remained feeble and prostrate and in bad nutrition until inunction of mercury was resorted to on the twentieth day of the puerperium. The improvement was then rapid and satisfactory, and the patient was discharged well on June 11th. This case suggests many questions. Why puerperal fever should develop under such conditions, and whether it is puerperal

fever, whether it is a climatic effect on the syphilitic patient, whether the syphilis stirs up an irritative fever in the system, or does the syphilis render the body more susceptible of septicæmia, and the septicæmia more persistent than usual, until specific remedies are used. In cases of puerperal fever of a continuous type associated with increasing cachexia, where the child shows also faint symptoms of congenital syphilis, it is always advisable to administer specific remedies. Of other forms of Indian puerperal fever the thermic is the one most frequently met with, and of course its main characteristic is intense and resistant hyperpyrexia. It is usually the sequel of pyrexia occurring before or during labour, although it may occur during the puerperal state, being most liable to happen on the third day in connexion with the usual slight fever which results from any affection or lacteal disturbances on that day. It may be associated with puerperal eclampsia, and cases of this kind that occur without albuminaria indicate an intense congestion of the meninges. Complex cases of puerperal fever in association with other diseases of the pyrexial type must sometimes occur."

MALARIAL INFLUENCE IN ABORTION AND STERILITY.

MR. ARTHUR J. WEATHERLEY, M.R.C.S. England, L.R.C.P., London, in his paper under the above title said:—

"From my experience in Africa, Florida and India, I do not think sufficient stress is laid on the malarial influence in abortion and sterility. In my practice I have had the following cases:—

	Confinements at Term.	Abortions.
England	56	2
Healthy parts of South	35	2
Unhealthy parts of Africa	40	20
Florida	30	22
India... ..	60	28

A large proportion of these cases, though living in malarious districts, did not abort at times of an attack of fever;

in fact, in very many cases, malaria only showed itself in the habit of abortion. I have also noted that a very much larger proportion of women are sterile in malarial districts than in others, and that if they reside many years this sterility becomes permanent, whereas if they leave before too long a time has elapsed they bear children. Of course in this latter class I do not include those who, miscarrying in malarial districts, bear children in non-malarial climates. Perhaps, as this paper has to be short, the quoting of two typical cases will be sufficient. I would like the experience of others in malarial districts on this subject, as I think its importance is not sufficiently recognised. A woman had frequent miscarriages in the plains. She was treated by various surgical and medical measures, including scraping out the uterus, both in India and in London. On her return to a malarious district, however, she invariably miscarried, generally in the third month. I saw her early in her fifteenth pregnancy (after ten following miscarriages in the plains), and advised her to go at once to the hills and stop there, giving her a tonic of citrate of iron, quinine and strychnine, and enjoining recumbency for ten days at a time when her period would have been due if not pregnant. She went safely to term.

Another woman had lived for years in a malarious district, and had never been pregnant. The first year on coming permanently to the hills both husband and wife suffered much fever, but in the second year both were in good health, and the woman became pregnant and went safely to term. These are only two instances of very many. The influence of malaria on abortion and temporary sterility is still more marked in the very deadly malarious climate of Florida, where I saw twenty-two cases of abortion to thirty confinements at term, and ten cases of temporary or permanent sterility in a period of two years in a very small district. In a malarious strip of

coast country in East-south Africa sheep and cattle constantly abort, and, in fact, the natives have recognised this so well that they keep their breeding stock inland and only send their stock into this strip of country to fatten. In this country there were no Europeans, but abortions were frequent among the native women, though I could get no figures as to the proportion. A large number of women who have been in malarious countries, even if they do not abort, suffer very much more when pregnant at the time when their period would have come on than is common with women who have not been in a malarious country, and require very strict precautions as to recumbency, &c., at such times. In such cases I have found that giving quinine, rather than tend to bring about abortion, certainly tends to ward it off. Though my experience does not extend over many years it embraces malaria in very different climates, but in all with the same effect in bringing about abortion and sterility, and proves a danger in the former case, which, I think, is not sufficiently recognised and guarded against."—From the *Lancet*, Feb. 2, 1895.

VARICOCELE TREATED BY INCISION, LIGATION AND SHORTENING OF THE SCROTUM.

Dr. W. E. PARKER, of New Orleans, reported 7 cases of this affection thus treated: An incision varying in length according to the size of the varicocele is made, and the scrotum shortened by converting the wound from a longitudinal into a transverse one. All cases which recovered with union by first intention are still doing well, the period since the first operation being seven months. The milder form of varicocele should be treated with a suspensary bandage; proper attention being given to diet, exercise and howels. A varicocele should be operated upon: (1) if it is of large size; (2) if it is painful; (3) if marked nervous symptoms are present; (4) if the testicle is atrophying; (5) if the varicocele is increasing rapidly; (6) if it is

an obstacle to entering a public service; (7) if, on account of a patient's occupation, a suspensary is troublesome and he desires an operation.—*Boston Med. and Surg. Jour.*, Dec. 27th, 1894.

THE TREATMENT OF VOMITING IN CHILDREN.

The *Journal de Clinique et de Therapeutique, infantiles*, publishes the following directions and formulæ to be used in the treatment of vomiting in children: Very young children should be made to swallow small pieces of ice before nursing. Milk diluted with a little Vals or d'Alet water should also be given. Before the child is nursed three grains and three quarters of bismuth subnitrate should be put on its tongue. The diet should be restricted, the milk sterilized, and the time of nursing properly regulated. For older children iced drinks, ice and effervescent waters are recommended. A teaspoonful each of the following mixtures is to be taken, beginning with the first: 1. Potassium bicarbonate, thirty grains; syrup, two hundred and twenty-five grains; water, an ounce and a half. 2. Citric acid, thirty grains; syrup of citric acid, two hundred and twenty-five grains; water, an ounce and a half.

FONSSAGRIVES recommends the following: Essence of cajuput, from six to twelve drops; sugar, thirty grains. When this is thoroughly mixed, add an ounce of syrup of tolu and three ounces of Melissa water. From a teaspoonful to a tablespoonful is to be taken every hour. HUCHARD prescribes seventy-five grains of tincture of iodine and two hundred and twenty-five grains of saturated chloroform water, of which from two to six drops are to be taken in a little sweetened water.

For nervous children, over twelve years old, EWALD prescribes cherry laurel water, three quarters of an ounce; tincture of belladonna, seventy-five minims; cocaine hydrochloride, four grains and a half; morphine hydrochloride, three grains. From five to ten drops are to be taken every hour

or two. The following formula is recommended by GUIBOUT: Syrup of lemon, three hundred grains; lemon juice and orange flower water each two hundred and twenty-five grains; Linden water, two ounces; Sydenham's laudanum, nine grains; sulphuric ether, fifteen grains; potassium bicarbonate, thirty grains. The bottle should be corked immediately, and from a quarter to a third of the mixture is to be taken at once. LE BARILLER advises the use of the ether spray over the epigastrium; also blisters or the actual cautery over the same part.—*New York Med. Jour.*

THE MECHANICAL TREATMENT OF CHRONIC CONSTIPATION.

Dr. F. E. LE MARINEL believes (*Jour. de Med. de Chirur. et de Pharmacologie.—Amer. Lancet*) that the mechanical treatment should be the treatment of choice in a large number of forms of chronic constipation. The manœuvres of massage comprise three forms—frictions, pressures and percussions. In addition various active and passive movements are undergone—flexion, extension, abduction, pronation, supination, rotation and circumduction.

The various forms of constipation which are likely to be benefitted are: (1) from anæsthesia of mucous membrane; (2) from muscular paralysis; (3) from induration of the stools; and (4) from mechanical obstacle. The contra-indications are: (1) acute inflammation of intestines, peritoneum, peri-intestinal cellular tissue, or of intra-abdominal veins; (2) ulcerations (round, tuberculous) of stomach or intestines; (3) tumours of the alimentary canal (sarcomata, carcinomata, polypi); (4) voluminous fæcal masses of stony hardness. An interesting comparison is given of the value of diet, habit, purgatives, hydrotherapy, injections, electricity, various medicinal methods, with that described by the author, the general conclusion being that of all these methods only one can be compared to the mechanical, and that one is electricity. But when one

considers the question from the standpoint of success, massage shows figures which are not surpassed by electricity. As to facility of application massage is superior, in that it does not require any apparatus, and can be applied equally well at the house of the patient as at the office of the physician. Further, massage is better borne than electricity, and particularly by children. A series of 147 cases are reported, the treatment being that advocated in the paper. The care shown in the report, the apparent accuracy of diagnosis, the fullness of detail, give an especial value to the clinical histories. In the cases cited, those of the synoptical table, and eleven in detail, 158 in all, radical cure was obtained in about 90 per cent. The final conclusions are:—

Mechanical treatment takes rank among those therapeutic agents whose action is most energetic upon the circulation, the respiration and general nutrition. It can modify the abdominal circulation and cause certain foreign congestions, notably those which are met with in abdominal plethora, to disappear. Under its action the muscles acquire an increase in volume and strength. It is the best curative agent in constipation dependent upon muscular paresis or paralysis not of central nervous origin, or upon diminished sensitiveness or anæsthesia of the mucous membrane due to local causes. Finally, it is formally contra-indicated when constipation is due to acute inflammatory lesions or to tumours.

PALUDAL NEURASTHENIA.

TRIANTAPHYLIDES, of Batoum, states (*Sem. Med.—Brit. Med. Jour.*) that among the manifestations of malarial poisoning there is one bearing resemblance to neurasthenia which has hitherto escaped notice. It is seen in persons who present no other sign of chronic paludism (enlargement of spleen or liver, anæmia, etc.) During the last four and a-half years the author has seen some fifty examples of the condition, and its malarial origin has been established by the

discovery of typical hæmatozoa, as also by its amenability to treatment by quinine. In its slightest form paludal neurasthenia expresses itself merely as a state of mental apathy or psychological *malaise*. In a higher degree of development it may be accompanied by nearly all the psychical, vasomotor and other disturbances characteristic of ordinary neurasthenia. Insomnia, digestive disorder and headache are, however, less constant in the paludal than in the ordinary form. Spinal hyperæsthesia is not well marked, but umbilical hyperæsthesia is rarely wanting, sharp pain being caused in the majority of sufferers by pressure in the umbilical region on the left side. The affection generally comes on by degrees, and is preceded by vague nervous disturbances which occur paroxysmally, till after a time the neurasthenic condition becomes permanent. In recent cases a cure can, as a rule, speedily be effected by hypodermic injections (1 in 4) of hydrochlorate of quinine in doses of 60 centigrammes to 1 gramme. In cases of relapse a large number of injections is required. In inveterate cases sulphate of cinchonine, given by the mouth or hypodermically, or sulphate of cinchonidin, together with tonic measures, wet packing, and especially sea bathing, has often been successful in the author's hands.

TREATMENT OF VOMITING AND GASTRIC IRRITATION.

Dr. C. MILES recommends (*Clin. Jour.*) the following:—

R/ Creasot. arg.....m.j.
Aqua.....oz viii.

M. To be well shaken and a teaspoonful taken every five minutes.

D. R. B.

APOPLEXY AND THERMOGENESIS.

Dr. CHARLES L. DANA concludes (*American Jour. of Med. Scien.*) his observations as follows:—

1. That all intra-cranial hæmorrhages, whatever be their lesion, are much more apt to be accompanied with immediate distri-

bances of temperature than are necrotic processes from embolism and thrombosis. These temperature disturbances in hæmorrhages are, in rare cases, a sudden initial fall; then in almost all cases, except where the lesion is small, there is within a day or two a rise of temperature of from one to three degrees. On the other hand, in acute softening this initial fall and early rise do not occur unless the process is very extensive or involves the pons.

2. In apoplexy due to hæmorrhage the temperature is greater upon the paralyzed side than on the normal, the difference averaging about one degree. In acute softening this unilateral difference of temperature does not occur, or is extremely slight.

3. The rise of temperature due to apoplectic lesions depends more upon the extent and nature of the lesion than upon its location. Lesions of a hæmorrhagic character in the cortex, however, are especially apt to cause a rise of temperature. Lesions in the pons also, either of hæmorrhagic or softening character, almost uniformly cause a rise of temperature.

4. There is as yet no clinical evidence that lesions of the basal ganglia, or the parts about them, cause temperature rises on account of destruction of certain thermic centres; in other words, the clinical and pathological evidence of thermic centres in the human brain, aside from the parts mentioned, is yet inadequate.

5. Finally, I would specially impress upon you the great value, from a diagnostic point of view, of a careful study of the temperature changes after apoplectic strokes. The temperature should be observed on each side of the body, in the rectum, also, if possible. With data thus obtained one can, I feel sure, gain much more positive evidence as to the nature of the lesion in these cases, and I have repeatedly been able to satisfy myself, in my clinical work, of the nature of the lesion by means of the methods referred to. I do not believe that,

with the help of the numerous factors which we now have in aiding our diagnosis, there are many cases of apoplexy in which it is difficult to make a diagnosis. The old-time tabulation of differential points in diagnosis between hæmorrhage and acute softening still remains of value. We need, and must use, all the helps possible; but if we, in addition to other methods, carefully apply the thermometric, I am sure we can reach vastly more satisfactory results.

TREATMENT OF SPASMS OF THE ANUS.

The *College and Clinician Record* has the following:—

Ext. Belladonnæ	gr. 4-½.
Iodoformi	gr. iv.x.
M. fr. Suppositorium—	(<i>Clin Jour.</i>)

D. R. B.

TREATMENT OF IN-OPERABLE CANCER OF THE UTERUS WITH INTRAPARENCHYMATOUS INJECTIONS OF ALCOHOL.

F. VULLIET has obtained (*Sem. Med.—Brit. Med. Jour.*) excellent results in cases of uterine cancer beyond operation by means of injections of absolute alcohol made into the substance of the tumour. This mode of treatment was recommended in 1892 by H. SCHULTZ, but VULLIET claims to have employed it independently since 1891. The treatment, according to the author, is indicated under the following conditions: When the disease has spread so far that its complete removal by hysterectomy is impossible; in cases in which suspicious infiltrations are present after hysterectomy; in cases of recurrence of the disease after operation; and when a uterine tumour presents nothing definitely cancerous, but is nevertheless suspicious. In the last case injections of alcohol may be made all round the seat of disease after removal of the suspected tissues. VULLIET's procedure, which differs from that of SCHULTZ, is as follows: The vagina, the cervix and the surface of the tumour are washed first with a solution of soda, next

with one of corrosive sublimate (1 in 1,000). After careful drying of the parts with tampons of cotton-wool the patient is placed in the genupectoral position and a speculum is introduced, through which the injections are made. The operator should have at hand three or four PRAVAZ'S syringes filled with absolute alcohol. The first injection should be made into the centre of the tumour. If the disease is scirrhus the needle at once strikes hard tissue; if it is encephaloid it first strikes friable tissue, in which case it must be made to penetrate until resisting tissue is reached and then only must the piston be pressed. If the prick causes slight hæmorrhage the injection should not be made until the bleeding has stopped, otherwise the alcohol will be washed away by the blood. From 3 to 7 drops should be injected at a time, and the instrument is left in position for a certain time, during which injections are made in the same manner with the other syringes, which are also left in position. The first syringe is then withdrawn and thrust into another part of the tumour, where a few drops of alcohol are injected, the instrument being again left in position as before, and so on. In this manner from 9 to 12 injections are made at one sitting, proceeding from the centre of the tumour to its circumference. The last injection should be made all round the tumour in a zone of tissue to all appearance perfectly healthy. These injections, as a rule, are well borne, the patients being able to get up and walk home directly afterwards. In the case of faint-hearted or exhausted patients, who cannot bear more than one or two injections at a time, the sittings must be more numerous or chloroform must be used. The effect of the injections, according to the author, is quickly shown by the diminution, and then by the more or less complete stoppage, of the foul smelling discharge and bleeding. At the same time local examination will show progressive hardening of the granulations, and healing of the ulcerated

surfaces. The alcohol appears to produce in the tumour and surrounding surfaces a sort of artificial cirrhosis which retards the evolution of the growth, and consequently lengthens to a greater or less extent the period of survival. The ischæmia brought about by this cirrhotic transformation seems to play an important part in the action of the remedy. The results of the treatment described are, according to the author, very superior to those of curetting. These injections are usually sufficient by themselves for the palliative treatment of inoperable uterine cancer. In cases in which a layer of fungosities is present on the surface of the growth which do not disappear under the influence of the injections, it may be necessary to combine curetting with the injections; the fungosities should first be removed with a blunt curette, and the raw surface should then be cauterised with chloride of zinc, or the thermo-cautery.

TREATMENT OF PURULENT OPHTHALMIA OF THE NEW-BORN.

M. KALT related (*Lancet*) at the Académie de Médecine, Paris, the numerous successes yielded in the treatment of the above serious affection by abundant irrigation by means of a 1 in 5,000 solution of potassium permanganate. The apparatus devised by him for this purpose consists of a small funnel, the nozzle of which is introduced between the eyelids, while the other extremity is connected by means of a tube with a reservoir placed at a height of thirty centimetres above the eye. Each irrigation is effected every morning and evening with two litres of the solution at a temperature of from 30° to 35° C. Where corneal ulceration exists four daily irrigations must be practised for the first three or four days, after which they may be made less frequently. In order to avoid relapses the douching must be continued until all secretion has ceased. The superiority claimed for this mode of treatment over cauterisation

tions is that it can be easily applied by the nurse.

ARISTOL IN OTORRHOEA.

According to a very good authority aristol gives very good results in the treatment of chronic otorrhœa where the purulent discharge has given place to a serous drain, and in granulations of the middle ear, not depending on caries. The ear is washed out with a boric acid solution, and then the aristol in very fine powder is thrown on the tympanum. The operation is renewed once a day.—*Med. Press. and Circ.*

CHLORAL IN EAR-ACHE.

BRODNAX has the following remarks about the use of Chloral in Ear-ache in his paper contributed to the *Polyclinic (Therap. Gaz.)*:—Camphor, 10 grs.; chloral, 10 grs.; carbolic acid, 10 grs.; castor oil, $\frac{1}{2}$ oz. Drop into the ear warm. Fill the ear full, apply a piece of cotton wetted in warm water to fill the external ear, then a cloth wrung out in hot water as warm as can be borne.

D. R. B.

CHLORAL IN CORYZA.

BRODNAX says (*Therap. Gaz.*) that in coryza where the Schneiderian membrane is very irritable, chloral, 10 grs. (or drops); castor oil, $\frac{1}{2}$ oz., used with a soft mop applied over the surface after being dried, acts to check the excretion of mucus, and lulls the irritation and the head pains.

D. R. B.

A PIGMENT FOR WARTS.

The *Practitioner* has the following:—

R/	Acid Salicylici	...	grs. xv.
	„ Lactici	...	m. xv.
	Collodii flexitis	...	ad. oz. ij.

M. et ft. [pigmentum.

To be applied morning and evening.

D. R. B.

POTASSIUM PERMANGANATE AS AN ANTIDOTE FOR MORPHINE.

Dr. GRAHAM CHAMBERS arrives (*Canadian Practitioner*) at the following conclusions after a series of experiments:—1. Potassium permanganate, in dilute solution not stronger than one grain to an ounce, may be given by the stomach without danger. 2. Potassium permanganate, subcutaneously, is poisonous. 3. Potassium permanganate, grain for grain, completely decomposes morphine, the decomposition occurring in acid media more rapidly than in a neutral medium. 4. Food-stuffs and acetic acid do not interfere with the decomposition. 5. Potassium permanganate is an efficient antidote if taken while the morphine is in the stomach.

The question still remains as to whether potassium permanganate is of therapeutic use after the morphine is absorbed into the system. It has been proved conclusively that if morphine is introduced subcutaneously into the system it is excreted into the stomach. Now, the morphine passes from the blood into the stomach by osmosis and by excretion, and, by the principle of osmosis, more morphine will be excreted if it is decomposed as soon as it passes into the stomach. Reasoning on this principle, we should expect that repeated small doses of potassium permanganate by the stomach would be of use in cases where the morphine has been absorbed into the system. This is rendered more probable by the fact that morphine, as a rule, is a slow-acting poison.

CALOMEL AND NEPHRITIS.

Dr. L. SKLODOUSKI has been using (*Deutsch Arch.—Clin. Jour.*) calomel as a diuretic in nephritis with excellent results and states distinctly that kidney disease is no contra-indication to the use of calomel. (Thus falls one more ancient belief.)

D. R. B.

HYSTERO-EPILEPSY DUE TO ASCARIDES.

S. N. KONEFF relates (*Meditzinskaia Beseda.—Brit. Med. Jour.*) at length a case of severe reflex neurosis due to intestinal parasites. The patient—a peasant lad, aged 18—came under his observation with “fits,” recurring with increasing frequency and severity. They had commenced in 1885, at first occurring twice or thrice a year. At the time of admission the fits occurred several times weekly, the seizures lasting from one to two and a half minutes and mostly recurring successively twice or thrice, with intervals varying from five to ten minutes. The fits consisted in exceedingly violent clonic convulsions accompanied by loss of consciousness, insensibility of the pupil, trismus, etc. They were ushered in by globus hystericus or epigastric pain, or sometimes vomiting, and invariably made their appearance shortly after a meal. After the attacks the patient always remained in a drowsy state for one or two hours, coming round but very slowly and looking extremely weak. The administration of KB³ (in increasing daily doses of from 20 to 80 grains during a month) and a subsequent course of laxatives (Carlsbad salts, rhubarb, etc.) did not produce the slightest effect either on the frequency or on the severity of the fits. Ultimately, having elicited the fact that the lad had voided ‘a worm’ five years previously, the author tried santonine (1 grain three times daily for three days) with the result that seven ascarides were expelled, after which all the symptoms described ‘vanished as if by magic,’ and never recurred up to the patient’s discharge five and a half months later.

FIFTY CASES OF RECTAL SURGERY.

Dr. RICKETTS gives (*Mathew’s Med. Quarterly*) detailed statistics concerning fifty cases of rectal surgery, and concludes from these cases that in such operations it is necessary to have the patient completely anesthetized,

and that the use of chloroform is the quickest and best means of securing this end. Cocaine is not satisfactory. This drug should, however, be given the preference in minor surgery.

As to the clamp and cautery, he relies wholly upon them in removing hæmorrhoids of any size or number, it being the safest and quickest method, and so followed by speediest convalescence.

An application of the actual cautery to all ulcers and fissures at one sitting has been the most efficacious means of destroying them that he has found.

Division of fistulæ with the bistoury has not failed in any attempt to obliterate them, without in a single case destroying the function of the sphincter.

Of eight cases of ischio-rectal abscess, five occurred at the time immediately following an acute gonorrhœa. Fistulæ resulted, and were operated upon in each of the eight cases. He believes that acute gonorrhœa is the most frequent cause of ischio-rectal abscess in the male. However, an acute inflammatory process, due to any cause, is as likely to produce an abscess, the contents of which may escape into the rectum.

It is interesting to note that thirty of the cases were either tubercular or syphilitic. In the four cases of carcinoma the disease had progressed to such a degree as to render it unwise to attempt a radical operation, except towards the last, when colotomy should have been resorted to, but was refused.

Case No. 50 was unique, in that, falling from a table, a piece of ducking one and a quarter inches square was driven along the side of the rectum by a chair leg. The foreign body remained concealed for five months without detection, until the writer was consulted. A portion of the sphincter was torn away, but its office remains good at the present time.

The average loss of time is but little for surgical cases of this nature.

COPPER SULPHATE AS A DISINFECTANT.

H. VINCENT claims that copper sulphate is the best disinfectant for faecal matters and the contents of cesspools, satisfactory results being obtained in twenty-four hours with 7 Gm. to 8.5 Gm. of the salt per 1,000 C.c. of matter disinfected. For typhoid and cholera dejecta 6 Gm. and 4 Gm. respectively, per 1,000 C.c. sufficed, the comma bacillus disappearing in about twelve hours. The greater the degree of fluidity in the matter to be disinfected, the sooner is the result attained, whilst a smaller proportion of disinfectant is required in summer than in winter, other things being equal. The presence of alkalies tends to check the action of both copper sulphate and chlorinated lime. For normal excreta mixed with urine it is recommended to employ 6 Gm. of sulphate per 1,000 C.c., to effect disinfection within twenty-four hours; in typhoid cases 5 Gm. per 1,000 C.c. should be used; whilst for cholera dejecta 3.5 Gm. per 1,000 C.c. will suffice, twelve hours only being required in the last two cases.—*Comp. rend.—Pharm. Jour.*

SALICYLIC ACID IN RING-WORM.

Salicylic Acid is highly recommended as an application to Ring-worm. It may be used as an ointment, but is much better as a saturated solution in collodion. One application is often all that is necessary to effect a cure, but more may be necessary. The pain caused is not usually severe.—*Med. and Surg. Rep.*

D. R. B.

A TREATMENT FOR ACNE OF THE FACE.

In an abstract from the *Bulletin Général de Thérapeutique* for December 30, 1894, which appears in *Lyon Médical* for January 13th, the writer gives the following formula which, he says, has often been employed at the Saint-Louis with success: Fresh lard, 750 grains; sublimed sulphur, 105 grains; beta-naphthol and styrax ointment, each,

30 grains. Applications of this mixture should be made with strong friction every night for a week, then interrupted for six days, when they may be repeated if necessary, although it is often useless to do so. If there is an appearance of small acute clusters, which generally show themselves toward the second day, the acne is ordinarily cured or very much ameliorated at the end of a week.

ICTERIC PRURITUS.

Alcohol, sulphuric ether, each 40 grammes (1½ fluid ounces); ichthyol, 10 grammes (2½ drachms). Rub thoroughly into the skin. Dissolves cholesterine crystals irritating the excretory canals of the sudoriparous system, and prevents them from forming again by impregnating them with a resinous substance. (BOULLAND, *Jour. de Méd. et de Chir. Prat.*, January 10, 1895.)

LARYNGITIS STRIDULUS.

Bromide of potassium in large doses, continued for several days. In a child of 12 months the dose was gradually increased by the author until it reached 1.50 grammes (23½ grains). Important to continue treatment for five or six days to prevent return of the attacks. (HUCHARD, *Jour. des Praticiens*, December 1, 1894.)

NEURALGIA.

'A Post Graduate Lecture by

W. R. GOWERS, M.D.

In most cases of neuralgia of the fifth nerve, such as that which I am about to show you, no organic lesion has been found. It is a matter which is still uncertain. Facts can come but slowly to tell us whether most cases of persistent neuralgia of the fifth nerve are due to a peripheral or a central cause. It is most difficult to discern evidence one way or the other from the symptoms themselves. Among the facts that we have learned which seem of clear significance there is the fact that disease of

the centre of the fifth, in the pons, may give rise to such pain, that disease of the fibres in their course, perhaps also in the Gasserian ganglion, may give rise to such pain, and that disease of the peripheral termination of the fibres may give rise to such pain. It is important, in connection with the conception of the pathology of neuralgia, to realize the fact that the nerve-fibres which conduct differ only in degree from the structures which generate the nerve-impulses. I have elsewhere laid great stress upon this fact. It has been brought out by recent discoveries regarding the structure of the gray matter of the nervous system. These discoveries have an important bearing upon almost every problem of disease. The nerve-fibres, those for instance of the fifth nerve which reach in the pons and disappear from perception in the spongy substance of a long column of gray matter, probably end in that substance by terminations slightly thickened, it may be, but absolute. We used to say, we used to think, that the nerve-fibres end in the cells of the gray matter. The cogency of the facts which have been brought forward prevents me, for my own part, from entertaining any doubt of the correspondence of the new statements with fact. We must conceive that from the cells of the nucleus of the fifth nerve branching processes go off which end by contiguity, but not by continuity, with the ends of the fibres that conduct. We must conceive that the impulses which pass up leap in some way from one to the other. I say "leap," but it may be that the most powerful microscope would not reveal the chasm over which they leap. Yet it is absolute; a break in the molecular continuity which permits the passage of chemical action. The leap is probably by simple motion, like that which produced the impulse in the first instance at the periphery, where branching processes of the cells (that is, of the long fibres) end or begin in slightly enlarged terminations in the skin.

I spoke of "branching processes," but I should rather say "separated fibrils." I need not go into that distinction, although it is one of fundamental importance, because it is explained fully in an address I have lately published, and in which these facts and opinions are readily accessible to you.* Remember how extremely complex is the spongy structure of the gray substance in every nerve-nucleus; that we have innumerable fibrils in close relationship, and among these there must be terminations which constitute definite paths in the closest contiguity, so that impulses readily pass from the one to the other. Others must be sufficiently near for an energetic impulse to pass between them, but not for a slight impulse in the closest, and among these we can readily understand that there may be a difference in special excitability at the time. An impulse may even reach the centre and excite an adjacent fibril ending more readily than the ending which is in strict relation to it, because the former is the more excitable. If we conceive, as I think we must, that the nerve-impulse which begins by excitation from simple motion, which is propagated by chemical processes as a form of motion, may pass again as simple motion where the absence of continuity prevents the chemical transfer of its special form of motion, it is not difficult to understand that adjacent fibrils may be thus excited, and that we may have what is called an "irradiation of sensation."

I remember a personal instance of that. Unpleasant as personal experience may be, never forget that the most useful knowledge of your professional life is that which is subjective. I remember having a carious tooth in the lower jaw, from which I suffered no pain. After a time I had an attack of recurring paroxysms of intense neuralgic pain in the upper jaw, just opposite the tooth, but never associated with any pain in the carious tooth. At last I had that tooth

* *The Dynamics of Life.* London: Churchills; Philadelphia: Blackistons.

extracted. The process of extraction caused the most intense paroxysm of pain in the upper jaw that I had ever experienced, and—it was the last. There can be no doubt that the irritation of the inferior dental branch of the fifth nerve had in some way, probably by some increased susceptibility of contiguous fibrils, led to their special excitation, and their stimulation had reached a morbid degree, intensifying itself until it possessed the capacity for neuralgia.

These new facts of the relation of the nerve-structures do enable us to understand many phenomena better; and that which explains much is seldom wrong. We can sometimes discern truth most surely by perceiving how much that is obscure is made clear, how much that is discordant is brought into harmony, how much more we can look for than before could be conceived.

Among the many varieties of neuralgia which you will find arrayed in text-books in serried ranks of formidable length and imposing order, three groups are specially important: (1) The neuralgic pains which occur at all periods of life from definite local irritation, such as that which decayed teeth induce. (2) The changing neuralgic pains that we meet with especially in middle life,—when a neuralgic pain comes in one part, then passes to another, then may leave and go to a third, then perhaps will change to some other temporary neurosis, and then may vanish as an altogether different malady comes on. (3) The class of which this case is an example,—senile neuralgia.

Neuralgia in its intense severity and enduring form is a malady of late life. It is the most formidable, the most distressing disease that life can bring, and it comes when the clouds should clear for the placid sunset, always longed for, seldom obtained. It is a disease of age. The influence of age on neuralgic pain is an important and significant fact, shown in a most striking way by the neuralgia which follows herpes. After the age of fifty years post-herpetic

neuralgia is prolonged in proportion to age, or rather its persistence is longer and far greater than the ratio to age. In middle age the neuralgia is trifling, and will last only for a week or two, but at seventy it will last for years, and may never pass away entirely. That is true irrespective of situation. I remember that Sir WILLIAM JENNER used to tell us of one striking instance of this. A man had herpes zoster on the calf of the leg. It was characteristic, and had left the usual sequel. It was before the days of chloroform; he had everything done which could be thought of, and at last he consented to endure the pain of having that part of the skin and muscle cut away. Obtaining no relief he shot himself. That may impress on you the intensity of the pain in the old which is trivial in the young. Why it should be I do not know, but we may form some dim conjecture when we remember that all these nerve-impulses are matters of, as far as we can see, chemical processes occurring in the tissues under the influence of life. The vital power of nutrition is the influence which renews the capacity for function, by replacing the molecules which have been changed by the functional action which has just occurred. As life goes on, the capacity for renewal becomes less perfect, so that molecules are formed less competent to achieve their purpose, more prone to give rise to abnormal impulses, and recovery from any other morbid process produced by outside influences is less perfect. The restoration of structure is not such as to enable it to do the normal work in perfect degree, and the degree of imperfection of constitution, so slight, it may be, as to us to be scarcely conceivable, may determine a morbid function adequate to produce intense pain, where under normal condition hardly any sensation should be caused. Every morbid functional action is followed by a renewal of capacity for like action, but renewing it every time in an increased degree. The nutritional power of life is an augmenting

influence, potent for all acquisition of capacity, healthy and diseased. The disorders of the nervous system that depend on morbid action are by the vital processes of nutrition, self-perpetuating.

This patient is forty-seven years of age. Her case makes us call to mind as possibly important the fact that senility is individual, so far as concerns the time of life at which age becomes "old age," and come the transition must, unless the shears snap the thread before it breaks. It is not only individual, but often partial. Every gray or hairless head reminds us of the fact, and should prepare us to meet with local troubles in some patients which are commonly met with only in those who are much older. The patient is younger than most subjects of her malady. But in life's sad cadence, tones only just distinct in one generation dominate that of the next. The patient inherits neuralgia, but not in its senile form. Her mother suffered from nerve-pain for several years, but in another seat and form. The transmission of tendencies to disease rather than of precise disease is forever rising conspicuously before us when we endeavor to discern the relations of the morbid processes we have to treat. Each tendency may be inherited in hindered or augmented form, often through causes that we cannot trace. Senile changes in one person may come only a little before due time, and in the offspring may be definitely premature. The strength of tissue vitality varies and is capable of variation through direct and indirect influences. Its primary influence is on function, the changes in nutrition first thus manifesting their presence. Ultimately derangement increases to loss as nutritional alteration advances to structural change. But this is clearly seen only when function readily reveals the early change.

There is another class of cases in which the inheritance of disease depends upon the inheritance of structural peculiarities, unimportant in themselves, incapable of mani-

festing their presence, and yet determining in an adventitious manner grave disease. Thus early death may be inherited through that which, save for its position, would entail no difference in any one of life's many features. Yet a simple inherited peculiarity in anatomical arrangement may produce pain. I press suddenly, and you see at once evidence of suffering. I again press gradually, and gradually lessen the pressure, and there is no pain. Again I press gradually, and suddenly withdraw the finger, and pain is acute. The patient has had fewer attacks of pain during the past week, but she has had more slight continuous pain. The substitution of this for the intense paroxysms is probably an improvement, but the patient seldom realizes it. A present evil, vivid in its experience, always seems greater than that which memory only presents to the consciousness. The slighter constant pain seems to her harder to endure than even the frightful paroxysms she suffered with intervals between of perfect freedom. The patient has been admitted with a view to an operation upon the nerve, but at present we have only an example of the frequent difficulty that is due to some improvement produced by the perfect rest or by the treatment it is right to try.

The result of division of the nerve is sometimes great and sometimes most disappointing. Benefit apparently depends upon the effect of preventing all afferent impulses from the periphery. When the neuralgia depends upon nutritional changes in the centre, rendering it unduly active, so as to generate impulses, the activity may be kept up, and the paroxysms of pain caused by impressions from the periphery which normally would have no effect. If the morbid process is actually in the periphery, or in the nerve-fibres which conduct and are also excitable, and the nerve can be divided above the morbid process, then the morbid impressions are arrested. But it may be

that even then the effect is not absolute, because the repeated abnormal impulses giving rise to the pain may have brought the centre into a state of spontaneous over-action, and neuralgia, primarily peripheral, may be ultimately central, and thus continue when the peripheral cause is removed from action. It is a similar process to that of epilepsy due to a tape-worm in the intestine, and may persist for years after the cause is expelled. Such arrest of the peripheral impressions is a point of great importance in treatment, but it is so formidable that only when other measures have failed can it be proposed. In many cases, especially in those which are not of long duration, we have the means of lessening the peripheral impressions for a little time each day by the hypodermic injection of cocaine, and, slight as this may seem to be, yet by its repetition it has often in time an unquestionable influence. Moreover, the importance of combining several influences, each of which alone has but slight effect, is often strongly impressed on the practitioner. It interferes seriously with the progress of therapeutic science, but we have to gather for the general good the fragments that we can secure without individual harm.

I can glance at some only of the more important of the other general elements in treatment. Apart from the removal of causes and the operative treatment, the chief measure is the promotion of the general health by every means in our power, avoiding whatever lowers the tone of the nervous system, and endeavoring to strengthen it by drugs, and to lessen, if we can, the tendency to its over-action in the same way. I do not hesitate to speak of treatment by drugs. I hold that their influence is by conveying energy in special forms to special structures in which energy is evolved. I wish we could associate drug with drag and draw. Alas! Professor SKEAT forbids, and from his decision there is no appeal. He only permits us, as the source of the word, dried roots and sugar-plums. Well, "these

things are an allegory," without doubt, but not that which I desire. In passing, may I ask if you know SKEAT'S "Concise Etymological Dictionary," in which words are arranged according to their derivation? If not, let me urge you to spend on it the first seven shillings and sixpence you can save or beg (I will not go farther, though I almost might). But, frankly, if a copy cost five pounds, I would sell any books I have, to that value, in order to obtain it.

To see the real significance of the use of drugs—as dynamical therapeutics—we must realize that all the impulses in the nervous system are the result of chemical processes occurring in the nerve-tissue. In this the molecules, their composition and arrangement, are determined by the influence of life, mysterious, inscrutable to us perhaps forever. But the processes depend on energy latent in the molecules, released by chemical union. Most drugs, like most food, are of value not as matter but because they convey energy. These chemical compounds present latent chemical energy in certain forms, and by entering into the composition of various structures they modify their composition or action or both: thus they do good; thus also at times they do harm. But into this question, fascinating as it is, I cannot go. You will find its grounds discussed in the address I have already referred to.

In the treatment of neuralgia I confess my own experience does not lead me to express any high estimate of the older drugs, such as sulphate of copper, but the influence of direct sedatives is unquestionable. The influence of cocaine is purely local, it is simply to arrest the afferent impulse; but the influence of morphine is central, it has special action upon the sensory structures. A strange thing, which may not have struck you, is that morphine and opium seem to have a special action upon the centre which is over-acting, so that the agents will quell pain without producing sleep, and indeed at first in doses too small

to cause sleep, if only they reach the centres with the sudden momentum secured by hypodermic injections. As a rule, in my observation, the greatest benefit has been obtained from the milder sedatives, especially Indian hemp and gelsemium, while the tonic effect that is usually essential for permanent benefit is produced, I think, even on the sensory structures, by strychnine more effectually than by any other drug. Its effect also seems to be proportioned to the momentum with which it is brought to bear upon the elements, and as it is not always convenient to give it as a hypodermic injection, and it is well to convey the momentum of its tonic influence with the momentum of gentle sedative influence, I have been accustomed to combine strychnine with Indian hemp or gelsemium, and to secure their more rapid transit by giving at the same time nitroglycerin. Our pharmacopœial one-per-cent. alcoholic solution called *tinctura trinitrini* is most convenient for the purpose. The important thing is that the initial dose should be uselessly small and rapidly increased, and that the mixture should not be alkaline. From this I have seen results, even in such cases as the patient before you, exceeding anything I could have expected, giving greater and more permanent relief than any other therapeutic measures, so much so that the treatment has made it unnecessary to operate on some patients who were admitted for that express purpose.—Post-Graduate Lecture by W. R. GOWERS, M.D., *International Medical Magazine*, Vol. IV, No. 2.

MALARIAL FEVER.

In certain cases, pseudo-continued malarial fever is accompanied by congestion of some important viscus, like the brain, cord, lung, etc., and diagnosis at the outset becomes very difficult. Pleuro-pulmonary hyperæmia especially leads the physician to think of a simple pneumonia, inasmuch as the patient complains of severe stitch in the

side, cough and dyspnœa, and spits blood; if together with these symptoms we take the initial chill, which is almost never wanting, and a temperature of 104° or 104.5°, the error of diagnosis becomes pardonable. Yet there is, in these difficult and embarrassing cases, one circumstance of great value, to which the physician should always attend, for it greatly enlightens his judgment, or at least puts him on his guard—namely, the absence of physical signs, especially those furnished by auscultation, which are present in a true pulmonary inflammation. There is no fine crepitation, even when the patient coughs; there is no bronchial respiration nor bronchophony; the ear barely perceives a very fine friction sound, superficial and circumscribed (due to the dryness of the pleura), and weakening of the respiratory murmur (due to the diminution in capacity of the pulmonary vesicles, connected with excessive fullness of the vessels which pass over their walls).

There entered the hospital of Nossa Senhora d'Ajuda a patient in exactly this condition: he had had an intense and prolonged chill; an acute and pricking pain below the right nipple, cough, dyspnœa and extreme febrile heat (105.5°) were present. The interne who received him (one of the most distinguished students of the sixth year of our university), in spite of the absence of the characteristic physical signs, diagnosed a pleuro-pneumonia and prescribed accordingly. The next day I diagnosed pseudo-continued malarial fever complicated by pulmonary congestion, and prescribed the sulphate of quinine exclusively for the space of four days. The patient, who was a young negro and very robust, recovered promptly.

In February, 1873, I saw a patient in São Christovão who presented a very singular array of symptoms, which environed the diagnosis with serious difficulties. He had high fever, which dated from forty-eight hours back, was somewhat delirious, and

had incomplete paralysis of the upper and lower extremities and the bladder, accompanied by general hyperæsthesia; the slightest pressure made on any part of the body, particularly on its upper half, excited cries of pain. There was slight congestion of the liver and spleen; the tongue was slightly furred and the bowels constipated. At first sight it seemed a case of spinal meningitis; but the absence of opisthotonos, the high degree of fever (105.2°), the hepato-splenic congestion, and above all the very important circumstance of these symptoms having appeared rapidly, reaching their maximum gravity in two days, led me to presume that it was a malarial pyrexia of continued type, attended by hyperæmia of the parts contained in the spinal canal. The treatment I advised, and which produced splendid results, was as follows: Twelve leeches to the verge of the anus; twelve wet cups along the spine; calomel in purgative doses; and then half a drachm of quinine in solution, given in three doses. Twenty-four hours after this treatment the patient was extraordinarily improved. The quinine was continued for several days, in decreasing doses, and convalescence was manifest twelve days after.

In the treatment of continued malarial fever, quinine should be given as soon as the diagnosis is established, even though the febrile reaction be intense. But it is important for the physician never to forget that before administering the precious specific he should fulfil certain previous indications—a condition at times indispensable to the absorption and action of the drug: he must combat the gastro-intestinal disturbance by means of an emetic and cathartic; remove visceral congestion by blood-letting, general or local, profuse or moderate, in accordance with the extent and severity of the hyperæmia, age, sex, temperament, and other individual peculiarities of the patient, and according to the condition of the pulse and date of the disease.—*Medical Age.*

HICCOUGH.

This is often a most distressing symptom, and in rare instances becomes, when prolonged, threatening and even dangerous.

In a recent number of *Vratch*, TATEVOSEFF calls attention to common tobacco-snuff as a remedy. He narrates the case of a patient suffering from chronic chest-disease, accompanied by violent attacks of cough, invariably succeeded by paroxysms of most obstinate hiccough. After a time the singultus refused to yield to any of the classic remedies—even cocaine was powerless. Then tobacco-snuff was employed in successive pinches until lively sneezing was induced. The result was most satisfactory, for with the first sternutation the singultus disappeared, to return no more.

CHILLS AS A CAUSE OF ERROR IN DIAGNOSIS.

Dr. WILLIAM OSLER makes some remarks upon this subject. Chills differ very much in their etiology, but may be divided into two main groups: (1) those from sudden shock to the nervous system, and (2) those from absorption of the toxic material formed by organisms. In so-called nervous chill fever is absent. In the second group there is always fever. The nervous chill is that met with in gall-stone colic or in the passage of a catheter. This initial chill is without fever, but subsequently, of course, there may be chills with fever due to infection. The disease most often associated with chills is malarial fever, and here the chill is of a characteristic kind; so that the name "chills and fever" is synonymous with malaria. The two great diagnostic points in malaria are the invariable association of the plasmodium of Laveran and the invariable curative effects of quinine. It may be said that within forty-eight hours the chill will cease in genuine malaria if quinine be used.

Chills cause errors in diagnosis in various affections. In tuberculosis the error may be made early or late in the disease, for it is at the two extremes of pulmonary tuber-

culosis that we have chills. These are a special feature of the early stages of tuberculosis. He has had many cases of early phthisis brought to him as malarial fever. Errors occur frequently in regions where paludism is common. Then there is the large group of septic processes with fever, such as abscess of the liver, which is a common cause of chills and fever in this latitude. There are very few cases of abscess of the liver which are not at first regarded as malarial fever, and thus much valuable time is lost in the treatment. Malignant endocarditis is another disease which is ushered in by chills and which is often treated for malaria. A not frequent source of error is the chill following and associated with pleurisy of a tuberculous form and empyema following the infectious diseases, as scarlet fever, etc., and following the formation of pus. The chills in typhoid fever are of the greatest importance, and have attracted attention for years. They occur in 2 or 3 per cent. of all cases, and are often due to the powerful antipyretics given. He had seen cases in which chills and fever had followed a large dose of antifebrin. In certain affections of the urinary passages, and more especially in pyelitis, chills occur which are often obscure. In chronic obstruction of the common duct by gall-stones there is the condition called by Charcot hepatic intermittent fever due to catarrhal cholangitis. In new growths of various kinds, as in cancer of the stomach, in Hodgkin's disease, and lastly in syphilis, errors as to the nature of the fever may be made. The important aids in the diagnosis of chills are quinine and the examination of the blood. *Medical Record*, January 12, 1895.

HÆMATOPORPHYRINURIA FOLLOWING THE
ADMINISTRATION OF SULPHONAL.

Dr. L. R. OSWALD related at length the history of a woman admitted to the Glasgow Royal Asylum, in August, 1893, for acute

mania, from which she had been suffering for a couple of weeks.

There had been no previous bodily or mental illness, though there was an hereditary predisposition to insanity and marked allied neurosis in the family history. She was at first given paraldehyde when it was necessary to produce sleep, and after a couple of months appeared to be on the way to recovery. The urine contained traces of albumin. When an hypnotic was required she was given chloral and bromide. In November she had a relapse, and in January, 1894, a burst of great excitement. Chloral and bromide seemed not to act very well, and in the middle of April, as she was in a state of chronic excitement, she was given sulphonal for the first time in doses of 15 grains (1 gramme) twice daily. This was continued regularly till about the middle of July, but in varying doses, from 15 to 30 grains (1 to 2 grammes), according to the condition. For a couple of weeks she was quieter, and the drug was given rarely; but in the beginning of August it was resumed in 10-grain (0.65 gramme) doses twice daily and continued until August 23rd, when an illness set in which proved fatal in eleven days. In all she took 2,200 grains (70½ ounces) of sulphonal. The doses were not large, and the drug had seemed to act well, procuring sleep, lessening excitement and calming the patient without producing any evident injurious effect. The following morning, August 24th, vomiting occurred, with abdominal pain and tenderness about the umbilicus on pressure. No urine was passed that day; but the next morning that passed was found to be scanty, of dark color, and, microscopically examined, to contain many altered blood-discs. The color was evidently due to hæmatoporphyrin. The patient continued in much the same condition from the 26th to the 31st, when she seemed better and retained a little peptonized milk. The pulse was fuller and the claret color was absent from the urine. After a rest.

less night she complained next morning of numbness of the hands and feet, and before evening was unable to move them. Her mental condition was clearer, and she localized impressions and their character correctly. The paralysis increased, however, and urine and fæces were passed involuntarily. The next day she grew gradually weaker and died at midnight, the temperature being at 100° F. (37.8° C.). During her illness there was a great decrease of blood-corpuscles, but some days before death they increased, showing that the destructive process had apparently stopped. Dr. BUCHANAN made a microscopical examination of the liver and kidneys finding the former in a state of generalized fatty degeneration, the fat being mostly in a finely-divided form. The kidneys presented a notable departure from the normal, the renal epithelium being homogeneously granular and the outlines of cells and nuclei almost entirely lost. In sections hardened in MÜLLER's fluid and stained with alum-carmine the granular appearance of the nuclei was retained; but the cells of the convoluted tubules, with the exception of a coil here and there, did not show nuclear staining, and the same was true of many of the straight tubules. The connective-tissue nuclei had also in great part disappeared, as well as those of the vessel-walls.

As albumin had been noted in the urine prior to the fatal illness, the changes in the kidney were probably due, at least in part, to previous renal disease. This would undoubtedly be aggravated by the irritative action of the excretion of hæmatoporphyrin and allied substances, as it has been determined that injections of blood-serum containing hæmatoporphyrin produce considerable irritation of the kidneys and changes in the urine.

Dr. OSWALD stated that about forty cases of a similar nature had been reported, all in women, and over one-half of them terminating fatally. From these cases it must

be admitted that the hæmatoporphyrin in the urine in such quantities is directly due to the sulphonal. When the cases for its administration are carefully chosen its value as an hypnotic cannot be called in question; but when the bodily condition is poor and the patient anæmic it is difficult to see the value of a drug that has been shown to lead to the appearance in the urine, in variable quantity, of the decomposition products of hæmoglobin. In cases of *folie circulaire*, though it lessens the excitement, it seems to render the stage of well-being less bright and clear intellectually. As a temporary hypnotic for acute cases in private practice, and as a sedative for chronic and incurable cases of excitement, it is of great service; but it must be given with care and watchfulness, as symptoms of great severity may arise with little warning, and the life of the patient be endangered.—*Glasgow Medical Journal*, January, 1895.

THE PARASITES OF MALARIA.

By A. Laveran.

Translated from *Traité des Fievres Palustres*, by J. H. Kellogg, M.D.

[To LAVERAN, perhaps more than to any other one individual, belongs the credit of the discovery of the malarial parasite. More recent observations have given an interpretation of some of the forms different from that of LAVERAN, but no writer has given a more graphic description of these curious animal forms than has this distinguished discoverer. In subsequent numbers of this journal we purpose to give the results of more recent studies of this subject.—TRANSLATOR.]

The parasitic elements of the blood present themselves under several forms, which appear to correspond to the different phases of the evolution of the same parasite. These forms, four in number, have been described in my first communication relative to parasites of malaria, under

the following names, which I believe to be useful to preserve, to avoid confusion:—

Cystic bodies Nos. 1 and 2, or, more simply, bodies Nos. 1 and 2; mobile filament and bodies No. 3, which appear to be only the cadaveric forms of bodies Nos. 1 and 2; and mobile filaments.

To these animals we may add also pigmented leucocytes, which obtain the grains of pigment with which they are charged from parasitic elements in the process of destruction, and which consequently are very characteristic of malaria.

Cystic Bodies No. 1, or Developing Bodies.

—These bodies consist of cylindrical elements, pointed at their extremities, usually curved and crescentic in form, and pigmented in the middle portion (Fig. 1.) The length of these bodies is 8 to 9 mm.; their width, about 3 mm. at the central portion. The extremities are sometimes very pointed, sometimes rounded (Fig. 1, A, B). The outlines are indicated most frequently by a single very fine line, but it is easy to make out that in some preparations a double contour exists. These bodies are transparent and colourless, excepting toward the central portion, where some pigment granules are aggregated. In exceptional cases the pigmented spot may be situated at one of the extremities. One often sees, on the concave side, a very fine line which seems to unite the extremities of the crescent (Fig. 1, B). When one of these bodies is attached to a red corpuscle (Fig. 1, C), the extremities of the crescent extend beyond the border of the corpuscle. The adhesion to the corpuscles is not strong, and appears to be purely accidental. Aside from the curved and crescentic bodies which are always numerous, one often finds some which are scarcely at all incurved, and of which the longest axis is a straight line. It is easy to see that these elements have a cylindrical form, and that their appearance is not due to the manner in which they present themselves to the observer. It is only

necessary, in order to demonstrate this, to produce a slight current in the pre-



FIG. 1. MAGNIFIED 1000 DIAMETERS.
A. and B. Bodies No. 1 with pointed extremities. C. Body No. 1 attached to a red corpuscle. D. Body No. 1. with rounded extremities. E. Oval body intermediate between bodies Nos. 1 and 2.

paration of blood containing some of these bodies, when one sees them turn upon themselves, thus presenting the different phases, but preserving constantly the same aspect.

Aside from these cylindrical, or crescentic elements, there are nearly always found oval bodies (Fig. 1, E) which appear to be intermediary forms between body No. 1 and body No. 2, which will be described later. In these oval bodies, grains of pigment are often disposed in the form of a regular circle, as in bodies No. 2.

Bodies No. 2 do not appear to be endowed with movement. They do not change their places in the field of the microscope, and when their form is modified the change occurs very slowly. One can sometimes follow the transformation of these pointed cylindrical bodies into oval and finally into spherical bodies.

The pigment grains situated in the middle of these bodies are not movable. They never present the lively and rapid movements with which the pigment grains of bodies No. 2 are often animated. Once only have I observed the existence of movable pigment grains in the interior of bodies No. 1. The blood had been collected in the moist chamber of RENVIER, where it had been forty-eight hours at the time when I made this observation. The double contour of these bodies (No. 1) had already become very apparent.

The bodies No. 1 contained in preparations of fresh blood rapidly change their form, of which it is easy to assure one's self by proceeding as follows: After having

found examples of body No. 1 in a preparation of fresh blood, make a drawing, then fix the preparation for a stage of the microscope in such a manner as not to lose the field in which the bodies drawn are found. At the end of some hours the bodies are examined again, and a new drawing made, and so on. One observes, generally, that at the end of twenty-four hours, bodies No. 1 have taken an irregularly spherical form. In the cadaver, the bodies No. 1 change their form more quickly still than in fresh blood. We find that it is necessary to collect the blood during the first hours after death.

I will endeavour later to determine what relation these bodies No. 1 sustain to those elements found in the blood of persons affected by malaria.

It is necessary to observe here that the presence of these elements in the blood is less constant than that of bodies No. 2. I have described them first, only in order to preserve the order which I have adopted in my previous publications. Sometimes bodies No. 1 are not found in the blood, although it may be rich in malarial parasites (bodies No. 2, and mobile filaments). Sometimes, on the contrary, the blood contains only bodies No. 2. In certain patients these elements exist in very great numbers in the blood. I have many times found ten or a dozen bodies No. 1 in a single microscopic field, employing ocular No. 2 and objective No. 7 of VERICK; that is to say, these bodies were nearly twice as numerous as the leucocytes in the normal blood.

Cystic Bodies No. 2, Spherical Bodies.—These elements are, without contradiction, those which are most often encountered in the blood of paludicellidæ. Fig. 2 shows the principal aspects under which they

present themselves to the observer. Their form is spherical, but we shall see farther on that this form may be modified under the influence of movements comparable to amœboid movements.

The dimensions are very variable, the smallest bodies No. 2 being scarcely 1 micromillimeter in diameter. The largest may have a diameter of 10 micromillimeters.

The contours are indicated by a very fine line. Sometimes a double contour (Fig. 2, C) may be distinguished, principally in preparations treated by osmic acid colored by picrocarmine and preserved in glycerine.

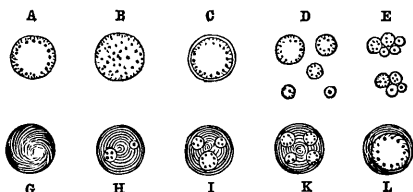


FIG. 2. MAGNIFIED 1000 DIAMETERS.

A. Parasites of average volume. B. Parasites inclosing movable grains of pigment. C. Parasite with double contour. D. Parasites of small volume, free and isolated. E. Parasites of small volume aggregated. G, H, I, K. Red corpuscles with parasites of small volume attached, 1, 2, 3, 4, etc. L. A red corpuscle to which is attached a parasite of average size. The corpuscle has lost part of its coloring matter.

These elements appear to be composed of a very transparent hyaline mass inclosing round granules of black or very dull fire-red pigment, identical with those which are found in bodies No. 1. The smallest bodies No. 2 often inclose only one or two grains of pigment (Fig. 2, B). In the largest of these bodies, grains of pigment are often regularly arranged in the form of a crown, or it may be observed that the pigment granules are disposed without order, and that they are animated by a very lively movement comparable to the movements of the solid particles which are found in a boiling liquid. This agitation of the pigment grains is also in analogy with the Brownian movement, but it has not the same regularity. Sometimes the movement stops completely. Some-

times it is increased without a change in the physical conditions of the preparation, being modified in appearance. *A priori*, one is tempted to believe that the pigment grains are animated with a self-movement. We shall see farther on, in studying the mobile filaments, that they are very probably agitated only by a common movement.

The pigment grains are generally immovable in bodies No. 2 of small volume, while in bodies No. 2 of medium and large volume they are nearly always seen in movement, especially if the preparation is kept at a sufficiently high temperature.

The spherical cystic bodies are sometimes free in the serum, sometimes adherent to the red corpuscles (Fig. 2, H, I, K, L.)

Bodies of small volume which are free in the serum are often united in groups of 4, 5, 6, or more (Fig. 2, E).

Cystic bodies attached to the red corpuscles have a variable volume. Sometimes we find bodies of very small volume, each inclosing only 1, 2, or 3, pigment grains, and 2, 3, or 4 in the same red corpuscle (Fig. 2, H, I, K). Sometimes larger bodies have a diameter nearly equal to that of the red corpuscle (Fig. 2, L), which becomes more and more pale, and finally appears only as a pale-yellow zone around the parasite.

The moment finally arrives when the red corpuscle can no longer be distinguished except by its contour; its natural color has entirely disappeared. Its transparency is greater than that of the parasite to which it is attached. The parasite appears then to be surrounded by a transparent zone of more or less concentric form. Suddenly the corpuscle disappears entirely. In proportion as the red corpuscle disappears, body No. 2 increases in volume.

One often finds, in preparations of the blood of paludicellidæ, red corpuscles which present small, clear spots (Fig. 2, G). It is probable that these clear spots are due to spherical bodies in a nascent state, so to speak, which do not yet contain

pigment. MM. MARCIAFAVA and CELLI appear to have observed this phase of the parasites.

Certain bodies No. 2 containing grains of pigment have exactly the same diameter as the red corpuscles. In this case we must ask ourselves if we have to deal with parasitic elements having independent existence, or with red corpuscles which have been changed by the presence of parasites which have entered into the interior of the red corpuscles as the weevil enters into a grain of wheat. This hypothesis and this comparison were made by Dr. RICHARD, in a communication to the Academy of Sciences, Feb. 28, 1882.

Besides bodies No. 2, which have a diameter nearly equal to that of the red corpuscles, there exist others which are only one to two micromillimeters in diameter, and which, consequently, are smaller than the smallest blood globules. The existence in the blood of bodies No. 2 of medium and small volume, free, independent of the red corpuscles, clearly shows that these bodies have an independent existence. Further: A red corpuscle which has no envelope, properly so-called, possessed of so great elasticity as to yield to the slightest pressure, cannot be compared to a grain of wheat. Dr. RICHARD has himself abandoned this hypothesis. In his last publication upon the microbes of malaria, he expressed himself thus: "These bodies, spoken of as cystic bodies No. 2, are sometimes found in groups of 2, 3, or 4, but more frequently, instead of swimming free in the plasma, they are attached to the red corpuscles, at the expense of which they are nourished. Sometimes the globule, as well as the parasite, conserves its discoid form. More often its edges roll up in such a manner that it embraces the parasite in its concavity. We might then believe that the parasite is inclosed in the globule itself, and for a long time I thought this to be the case. To-day I am of the contrary opinion.—*Revue Scientifique*, 1883, p. 114.

When one examines bodies No. 2 of medium or large dimensions at a temperature of 30° to 35° C. (86° to 95° F.), while the pigment grains which they contain are very much agitated, these transformations which take place with a certain slowness, as those of *amœbæ*, are easy to observe when one takes care to keep the same elements within the field of the microscope and to make drawings every five minutes. Some little sarcodic bodies sometimes form themselves upon the borders of bodies No. 2.

When one examines attentively a body No. 2, he sometimes sees these bodies divide into three or four similar elements, but of smaller volume. These bodies may again unite into a single one in such way that the body No. 2 regains its original appearance. At the end of a variable time the movements of the pigment grains cease. The body No. 2 then takes its cadaveric form, which will be described later.

Bodies No. 2 possess no visible nuclei in a fresh state, and even when coloured with carmine no nuclei can be discovered, so that these bodies cannot be confounded with pigmented leucocytes, even though the parasites may be nearly of the same diameter as the leucocytes.

When one carefully examines a preparation of blood showing spherical cystic bodies, there may often be observed at the borders of the parasites, filaments which move with great rapidity, and which impart to the neighbouring red corpuscles rapid and variable movements. These mobile filaments, the animated nature of which is incontestable, appear to represent the adult state of the malarial parasite, and their study then is of great importance. Unfortunately they, of all the different parasitic elements which exist in the blood, are those the observation of which presents the greatest difficulty. The movable filaments are very long in comparison with the parasites. Their length is, in fact, three or four times the diameter of the red cor-

puscles, perhaps 21 to 28 micromillimeters, but they are so slender and transparent that in a state of repose they cannot be discovered. It is with these as with the vibratile hairs of certain infusoriæ, which are not apparent in repose. We know that a glass rod plunged into Canada balsam becomes invisible, the index of refraction of the glass being nearly the same as that of the balsam. It will be easily understood that there is still greater reason why these extreme forms and transparent filaments should be invisible when in a state of repose in the serum of the blood. The movements of the mobile filaments then cease for some time after one has collected the blood upon a cover-glass, especially if the external temperature is low, and if the warming stage is not used. I have many times noticed that during the summer, when the external temperature was very high, the movements of the filaments were observed from the beginning of the examination of the blood; while in the winter, when the temperature of the laboratory was low, it was found necessary to wait long to see the mobile elements.

Let us note, in conclusion, that the mobile filaments correspond to a certain phase of development of the parasites of malaria, and that, consequently, one must not expect to encounter them constantly in the blood of *paludicellidæ*.

For these different reasons the study of the mobile filaments is very difficult, and it may be understood that these microbes, in spite of their length and the vivacity of their movements, for a long time escaped the attention of observers. Sometimes the mobile filaments are free among the blood corpuscles; sometimes they adhere by one of their extremities to a spherical cystic body, or bodies No. 2. The free filaments move among the red corpuscles like eels, and it is difficult to follow them in their movements. The filaments which are still adherent to bodies No. 2 are easier to study, because they remain in the field

of the microscope and move in the same place.

I have already said that the length of these mobile filaments is 21 to 28 micro-millimeters. Their thickness may be estimated at 1 micro-millimeter or more.

filaments are not observed in connexion with bodies No. 2 of small volume, nor in developing bodies or bodies No. 1. The mobile filaments are only observed at the borders of bodies No. 2 of medium or large volume.

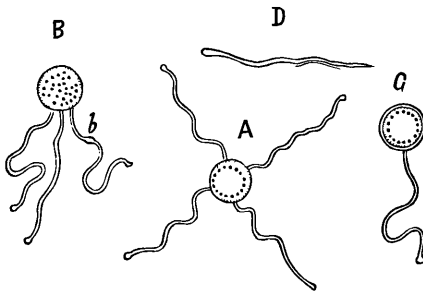


FIG. 3.

A. Body No. 2 presenting four mobile filaments. B. Body No. 2 presenting three mobile filaments, one of the filaments presenting a small enlargement (b) toward its central portion. The pigment grains are mobile. C. Body No. 2 with a single mobile filament. D. Free mobile filament (enlarged 1000 diameters).

The filaments are slightly enlarged at one extremity and pointed at the other (Fig. 3, D.) When these filaments are adherent to bodies No. 2, it is the free extremity which is enlarged. The terminal enlargement is spherical, or more often, pear-shaped. It is very difficult to observe, in consequence of the great activity of the elements. Sometimes, toward the central portion of the mobile filaments, one may observe small, olive-shaped enlargements (Fig. 3, B, b). These last enlargements are not regular and are very rare.

It is possible that there may be a canal in the interior of these mobile filaments. It sometimes appears as though a particle derived from a body No. 2 introduces itself into the interior of one of the mobile filaments still adherent, and glides from one end to the other of the filament, producing a slight enlargement. This phenomenon is very easy to observe when the particle introduced into the filament incloses a grain of pigment. The mobile

The number of mobile filaments which adhere to a single body (No. 2) is very variable. Sometimes one or two may be observed. At other times three, four, five, or even six. This is a matter difficult to determine for the reason that the filaments do not all move at the same time, and those which are not in movement are not visible. Sometimes the filaments are arranged in a very symmetrical manner (Fig. 3, A). Sometimes they are grouped upon the same

side (Fig. 3, B). Sometimes, finally, they wrap themselves around the spherical bodies to which they are adherent. No precise rule can be formulated upon this point.

The movements of the mobile filaments which adhere by one of their extremities to a body (No. 2, January number) are extremely lively and variable; they may be compared to those of an eel attached by its tail and making efforts to escape. In their movements the mobile filaments impart movements to the neighbouring red corpuscles, which aids in their discovery.

Dr. RICHARD has given the following excellent description of the variable movements which the mobile filaments present :—

“ These filaments are animated by movements so lively and energetic as even to change the form and displace the neighbouring red blood corpuscles. From time to time the movements diminish a little, to recover their former activity a few seconds later, when they encounter an obstacle

which hinders their movements. The filaments double upon themselves with agility. In watching these movements one is nearly ready to believe them to be voluntary. Thus one day I observed a filament about the end of which was wrapped a mass of fibrous reticulum. Suddenly it redoubled its activity; it was agitated with veritable shocks, movements of impatience, if I may so express myself, as if it was seeking to disentangle itself. These little dramas upon the field of the microscope are sometimes varied and very interesting. Thus one discovers some elements inclosed in a red globule as in a helmet, and if a vibrating filament finds itself situated exactly in the cavity of a red corpuscle, one sees it moving about as a pestle in a mortar, changing its form, beating it, so to speak. The little boxer soon frees itself, thanks to its elasticity. Sometimes the mobile elongations become entangled with one another, forming a regular snarl, when the movement is almost instantly arrested. When the vibrating element finds itself in a little lake of plasma, free from red blood globules, it may be seen to direct itself in a definite direction with great swiftness, from which one would be tempted to conclude that these organisms have the means of locomotion."

—*Revue Scientifique*, 1883, pp. 114, 115.

The mobile filaments often give to the spherical bodies into which they are inserted an oscillatory movement more or less extended. Sometimes even spherical bodies undergo movements of translation under the influence

of shocks communicated to them by their mobile filaments. I have many

times observed movements of this kind very extended in character, notably when the blood was examined in the moist chamber of RANVIER, and when consequently, the filaments had a larger field in which to move than in ordinary preparations.

The pigment grains inclosed in bodies No. 2 furnished with mobile filaments are sometimes in repose and sometimes animated with more or less lively movements, which have been already described.

We have seen that bodies No. 2 sometimes present amœboid movements. Fig. 4 represents the different aspects of a body No. 2 furnished with mobile filaments, drawn Dec. 1, 1880.

The movements of the mobile filaments may persist during two or three hours. In general, they disappear much more rapidly. In pressing upon the cover-glass in such a manner as to act mechanically upon a body No. 2 furnished with mobile filaments, one always sees the effect of this action in arresting the movements of the filaments. Again, in examinations of a spherical body furnished with mobile filaments analogous to those represented by A and B in Fig. 3, the first idea which occurs

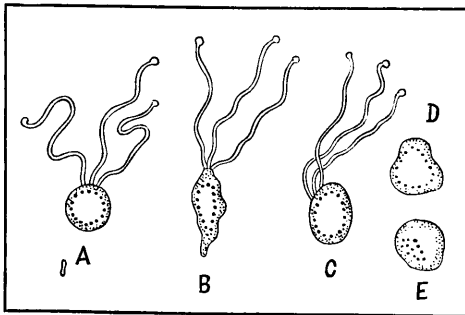


FIG. 4.

A. Body No. 2 found with three mobile filaments. C. The same body drawn at 3 o'clock in the afternoon. B. The same body drawn at 3.30 in the afternoon. D. The same body drawn at 3.35. E. Moveable elements can no longer be distinguished, drawn Dec. 2, 1880, at 8.30 in the morning. Magnified about 1000 diameters.

to the mind is that one is in the presence of an animated being, presenting a central and spherical pigmented mass and some pseudopodia. This was the first hypothesis which I made upon the structures of these bodies. A more attentive examination showed me that it is necessary to renounce this interpretation. In the first place, it is often impossible to discover mobile filaments upon the borders of bodies No. 2, even when these bodies have attained their average dimensions. In the second place, the number of mobile filaments is variable. Finally, one nearly always observes that the mobile filaments detach themselves from bodies No. 2, into which they have been inserted. These filaments, when free, circulate among the red corpuscles, while the body No. 2, appearing like a cystic pocket which has been abandoned, remains immovable and soon undergoes transformation.

The spherical bodies (No. 2) are probably small cysts in the interior of which these mobile filaments develop. I have many times seen mobile filaments which had only incompletely escaped from bodies (No. 2), and which, during the examination, com-

little serpents upon the mass of red globules, and it is very difficult to follow them long, so extensive and rapid are their movements. In cases in which these filaments are very numerous, the blood appears to be literally alive."—*Revue Scientifique*, 1882.

Cystic Bodies No. 3.—These elements are constituted of little masses of hyaline matter inclosing pigment grains, of which the arrangement is very variable. We may distinguish many types, as the spherical form, which is very regular, and in which the pigment grains are massed at some point of the periphery (Fig. 5, A); secondly, the irregular form (Fig. 5, B, C), in which the pigment grains are disposed without order; thirdly, the regular spherical form, with pigment grains collected at the centre, appearing in the form of a single pigment granule of very great volume; and fourthly, with pigment grains collected in the centre of the parasite, as in the preceding, but, in addition, there may be distinguished around the pigmented central mass a very regular segmentation of the neighboring parts.

Cystic bodies No. 4 have a size nearly equal to that of the leucocytes; they measure, in fact, from 8 to 10 micromil-

limeters in diameter; but they are very clearly distinguished from pigmented leucocytes (Fig. 5, D, E) by their refraction, which is much greater, and by the absence of nuclei, even when stained with car-



FIG. 5.

A, B, C. Bodies No. 3. D, E. Pigmented leucocytes (magnified about 100 diameters).

pleted their escape from the cyst. But I shall have occasion to speak again of the relation existing between these several parasitic elements which it is now only necessary to describe.

Dr. RICHARD, as well as myself, has observed that the mobile filaments adherent to bodies No. 2 often detach themselves from these bodies. He says: "These filaments often take an independent existence. They detach themselves from the mother element, and then with prodigious agility they precipitate themselves like

mine, which brings out so well the nuclei of leucocytes.

It is easy to assure one's self that these elements are only a cadaveric phase of cystic bodies Nos. 1 and 2. When one leaves upon a stage of the microscope bodies Nos. 1 and 2 and examines them at the end of twenty-four or forty-eight hours it may be nearly always observed that the elements are changed, and that they have attained the aspect of cystic bodies No. 3. The same is true of the body No. 2 furnished with mobile filaments. When the filaments

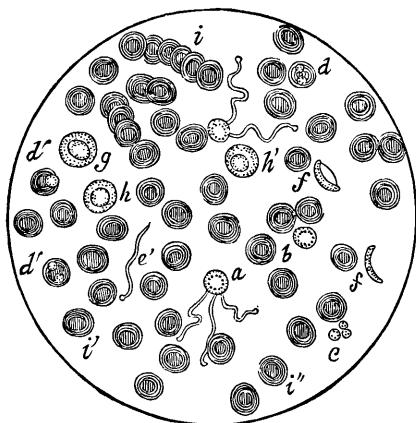


FIG. 6.

a. Bodies No. 2 furnished with mobile filaments; *b.* Body No. 2 of average volume in a state of repose; *c.* Bodies No. 2 of small volume, free; *d.* *d.* *d.* Bodies No. 2 attached to red corpuscles; *e.* A movable filament, free; *f.* *f.* Bodies No. 1; *g.* Pigmented leucocytes, *h.* *h.* Normal leucocytes.

are detached, the cystic bodies become changed and the pigment grains become immovable, tending to become agglomerated, or to dispose themselves in an irregular way.

These cadavers of cystic bodies Nos. 1 and 2 rapidly take the appearance of cystic bodies No. 3. It is at this state that the parasitic elements of malaria are found in great numbers in the small vessels of the different organs in subjects that die of pernicious malarial fever, notably in the kidney, liver and brain. These elements gathered in masses constitute the hyaline concretions which FRERICHs saw and described.

Fig. 6 gives an idea of the different aspects which the parasitic elements present in a field of red corpuscles. The figure is schematic, the elements being borrowed from different preparations. It is rare to find gathered in the same field of the microscope all the elements which are shown here. The enlargement is about five hundred diameters.

Pigmented Leucocytes and Free Pigment.—Besides the parasitic elements properly so called, one nearly always finds, in the blood of a patient suffering from malarial fever, free pigment grains and leucocytes inclosing a variable number of pigment grains. The grains of free pigment are in general regularly rounded and of variable volume. Some are as small as those found in bodies Nos. 1 and 2, the others are much larger. The grains of small volume are probably massed together to form pigmented grains of large volume which are much less regular in form than the first. The colour of the pigment is darkish or a dull fire-red.

The pigmented leucocytes are distinguished from cystic bodies No. 3 by the existence of

a nucleus which is coloured rose-red by carmine. The pigmented grains are of variable number. More often the leucocytes inclose one, two or three grains of pigment (Fig. 5, D). But we may often find, principally in individuals affected with pernicious fever, leucocytes very rich in pigment (Fig. 5, E). It is especially in the spleen, in subjects dead from pernicious malarial fever, that pigmented leucocytes heavily charged with pigment may be found. The arrangement of pigment grains in leucocytes is very erratic, but the pigment is always situated outside of the nucleus. Cystic bodies Nos. 1, 2 and 3 may become attached to the leucocytes. In general, the pigment becomes free in the serum before it is taken up by the leucocytes.

It is easily understood that the pigmented leucocytes are absolutely characteristic of malarial poisoning, since the pigment which they carry originates in the parasitic elements, and consequently is encountered in no other disease, a fact which at the present time is inexplicable.

Notes and Items.

THE SWEETNESS AND BITTERNESS OF THE DIVINE WORD.

We read in JEREMIAH, "Thy words were found and I did eat them." In EZEKIEL we read that the prophet was caused to eat the roll. We hear in AMOS of a famine which is not a famine of bread nor a thirst of water, but a hunger for the Word of God. In Revelation the seer eats the book of judgment and finds it sweet and bitter.

When we feel the reality and pressure of personal sin, when the heart is stirred by mighty hopes and fears, the Word of God possesses an exquisite and mysterious attraction. Nothing satisfies us then short of its becoming part of ourselves. It must be eaten. It must be interwoven with the texture and system of the mind. The Word of the Lord endureth for ever, and it is possible so to make it our own as that it shall never leave us. A great preacher has illustrated the pathos of the final separation between the hearts and things outside it from the Memoir of the Comte de BRIENNE. There we read that Cardinal MAZARIN roused himself from his dying bed at Vincennes, to take a last look at the treasures he had accumulated during his long ascendancy in the councils of the French Monarchy. When left alone in his last hours, he wandered, pale and wasted, into the gallery, dragging his limbs feebly along. The reporter of the scene was hidden behind the curtains, and heard the Cardinal as he halted at each step murmuring, "I must leave all this." Then as he caught sight of BRIENNE, "Give me your hand," he said, "I am very weak and helpless, yet I like to walk, and I have something to do

in the library." And then he again pointed to the pictures. "Look at that beautiful CORREGGIO, and this Venice of TITIAN, and this incomparable Deluge of ANTONIO CARACCI. Ah! my poor friend, I must leave all this. Good-bye, dear pictures, which I have loved so well." When we cannot see our path clearly across the world, when the heart is near breaking, when we faint under the consciousness of our miseries and our wounds, when we feel that it is very grievous to have left behind us the living treasures of the past, nothing will content us short of making the Divine Word part of our being, not to waste with disease or to perish with the earthly existence. We do not then criticise it, question it, stand outside of it. We so lay hold of it and incorporate it, that it is henceforth inseparable from our central personality. We can say when we eat the Divine Word that its verity is no more doubtful. It has been sealed by experience. We have lived through every throb of its strange and tragic story.

Sweeter than honey is the Word of God in the mouth. What is comparable to the taste of a Divine communication? To know that God is, that is much. One tells how he "danced with delight" when he realised that there was a God. To know past all doubting that God has spoken, that is far more. To see the darkness which we had thought impenetrable impaled and stabbed through by a living light, is there any ecstasy comparable with that? To those who have exhausted themselves in question and conjecture, how sweetly comes the Voice that speaks with authority and from behind the veil! We can endure the

world's despair if it is possible to break through the mists that hide the Divine Kingdom; if it is possible to see deeper into the future than the passing hour; if the effort of the soul, ever springing up into the eternal light, is not foiled; if the speculations of reason are distanced and rebuked by an authentic voice of God. The very thought warms the heart like sunshine. It is sweeter than honey and the honeycomb.

But the Word which is sweet in the mouth is bitter in the belly. The Word of God comes forth judging and making war.

As has been pointed out by one of the most suggestive commentators on the Apocalypse, the little book which the seer finds sweet and bitter is the scroll of judgment. It is full of what is tragic and violent, of what spoils and gives pain. Take it as you will, the story is hard and sickening. It tells us of dark clouds over the destinies of God's creatures; it tells us of agony endured vainly, of anguish which scorches the final sensibilities and burns up the last remnants of tenderness and humanity. We do not hear, as we hoped, that the forces which make for evil are at once reduced to impotence. On the contrary, we are told of their power and triumph. Much that is dear and sacred is to vanish in flame. The candlesticks that Christ has lighted in the world are often to flicker unsteadily and sometimes to go out. Nay, the redemption of the world is not to be achieved as we imagine. The Hands that hold the sceptre must first be outspread in anguish and death, and over the head of the Crucified King there must break the storm of the Passion. The Son of Man comes not to be ministered unto, but to minister, and to give His life a ransom for many. The King, the rightful Ruler of mankind, is seen upon His cross, disfigured with wounds and robed in shame, and the homage which He claims from all of us is, after nearly two thousand years, largely denied Him.

But in the end the Word of God is sweet. True, we see not yet all things put under Christ. His reign is not yet felt in all the order of life. There is no end within sight to the rude experiences of rejection and denial, of bitterness and violence. He who once refused to be made a king by force, still rejects the impatient expedients by which we seek to hasten His triumph. But we see Jesus. To endure the visible we must learn to look at the invisible. If we know that Christ is reigning through the disorder and tumult and darkness, it is enough for us. We can then bear life's burdens cheerfully, knowing that the bitterness of the Divine Word will turn to the sweetness of its first taste, that the way is appointed, that the end is sure, and that the issue will be more glorious than our desire. We shall see when it comes that our highest hope was too feeble, that the fruition is beyond our utmost dreams. As for the way, it may be long for the world, it cannot be long for any of us. Now is our salvation nearer at hand than when we first believed. Time may have passed with us but roughly; still, it has passed.—*The British Weekly.*

THE ART OF CONVERSATION !

I. Remember when you converse that others like to hear their own voices as well as yours.

II. Be careful, however much you feel moved to talk—and you may talk much if you have much to say—to give others space for reply. After exacting attention, do not forget to be patient and receptive in your turn.

III. People are never happy when *labeled* second best, nor will you ever be personally liked if you rivet upon them a sense of their own inferiority, or prevent them from shining or doing themselves justice.

IV. Encourage people to talk on what interests them. A man may be dull on all topics but one; find that one out, and he

will take you to his heart—ay, to his heart of hearts. You may also learn something.

V. Don't be too eager to shine. If you can't shine without effort better not to shine at all; it won't be a success.

VI. Don't sneer at trade or commerce in the presence of self-made men. Don't talk of *gentlefolks* and *gentlemen* over much, or brag of birth or connection, especially in the presence of those who have neither.

VII. Don't fear or resent overmuch people's bad opinion, but take care not to deserve it.

VIII. Self-consciousness paralyzes spontaneity. Self-effacement conquers more infallibly than anything else; and he that humbleth himself shall be exalted.

IX. In company you must take the tone before you can give the tone, or you will have no *ποῦ στῶ* to work from.

X. If you are willing to be a pigmy among giants, you will never be a giant among pigmies.

XI. If you must be cock of the walk, and feel yourself irresistibly impelled to crow, try to crow on something better than a drughill, and over something better than bantams.

XII. There may be deep sympathy without talk, but no good talk without sympathy.—Rev. H. R. HAWEIS, M.A.

MUTATION.

By James Clarence Harvey.

Upon the shores of No-man's-land,
I met an angel, one whose wings
Shed beams of light on either hand,
As radiant as the sunrise brings.
And happy souls, with eager tread,
Passed up and down the sandy slope;
"Oh, tell me your fair name!" I said;
She turned and smiled, and answered:
"Hope."

Along the shores of No-man's-land,
The angel walked, with folded wings,
And shadows fell on every hand,
The burden that the night-wind brings.

With head turned backward, sad and slow,

She paced the sands, her eyelids wet,
"Hope mourns," I said; and soft and low,
The angel sighed: "I am Regret."

—From *The New York Independent*.

EFFICIENCY OF MISSION BOARDS.

The work of a board of foreign missions has two departments, each with two divisions. The home department has to do (1) with the collection of funds and appointment of missionaries, and (2) the education of the Churches. The foreign department has in charge (1) the detail management of the missions, and (2) the establishment and application of the general principles which underlie and control all mission enterprise. The successful conduct of the work depends upon the wise co-ordination of these four divisions. To allow any one of them to fall into disuse, or to become overshadowed by the others, is to inflict serious injury upon the general work.

It is becoming increasingly apparent to those most thoroughly acquainted with the subject, that there is great danger lest in each department the first division overshadow the second. Appeals for money and men take precedence of that broad, educating influence which furnishes the most reliable assurance of a steady supply of both. The effort to mete out fairly and wisely the modicum of cash, first between missions, then between Churches, schools, preachers, teachers, buildings, hospitals, etc., so monopolizes time and strength that the fundamental questions of the aim and object of missions, the relations between missions and native communities, the organization of native Churches, get but scant consideration. It is simple fact that notwithstanding a century of experience there is no general understanding of these principles among the Churches, no general agreement between the different boards, scarcely even among the members of any one board. The reason for this is plain. With the expansion of the work the organization is

swamped by details. Money must be had. It is easier, takes less time, and is more immediately effective to make an appeal than to set forth the great character of the work. The question of the rental or the purchase of a school building must be decided to-day, that as to the best organization for a native Church can wait till to-morrow. The result was voiced by a business man after a few months' experience as member of a prominent board. "It seems to me we do nothing but vote money. The broader consideration of the principles of missions we do not seem to be able to take up at all." Probably the great majority of the members of the boards would agree with him.

It is undoubtedly easier to point out the difficulty than to suggest a remedy. 'It will not do to slight the details. Upon them depends in great measure the success of the work. If, on the other hand, the details swamp the principles, the work becomes

mere mechanical routine.—*The New York Independent.*

BIRTH.

At Kia-ting Fu, Szechuan, April 7th, the wife of Dr. O. L. KILBORN, Canadian Methodist Mission, of a son.

ARRIVALS.

At Hongkong, March, Dr. and Mrs. JOHN C. THOMSON, London Mission (returned).

DEPARTURES.

From Shanghai, 13th April, Miss HOAG, M.D., Methodist Episcopal Mission, for U. S. A.

From Shanghai, 3rd May, Dr. and Mrs. MATHEWS and family, American Episcopal Mission, for England; Miss REIFSNYDER, M.D., Woman's Union Mission, for U. S. A.; Dr. G. Y. TAYLOR, American Presbyterian Mission, for U. S. A.

From Shanghai, 8th June, Dr. STEWART, of C. I. M., for England.

OFFICIAL NOTICES.

The following have been duly elected members of the Association:—Fullerton Boyd Malcolm, M.D.; Julia Maude Donahue, M.D.; Alfred Hogg, M.A., M.B., C.M.; Rev. C. R. Hager, M.D.

We have pleasure in announcing that Dr. J. C. Thomson, of the London Mission, Hongkong, has been elected Secretary, and has kindly consented to act. All nominations, voting papers and other business not strictly connected with the Journal, must, in future, be addressed to him.

Presidential Notice.

As was generally expected the Majority Report of the Royal Commission appointed to investigate the Opium Traffic in India does not favour any radical change.

According to this Report the number of those using opium in India is small, and any evil effects it may have on some is more than counterbalanced by the great relief its use affords to those suffering from pulmonary, bowel or even malarial troubles.

But little is said of interest to us in China. In this respect the document is more noticeable for what it does not than for what it does contain.

The morality of a Christian nation being identified with the cultivation and sale of the poppy, as well as the actual amount of harm done by its consumption in China, are questions to which we should like to see authoritative answers.

For us as Christian medical men it settles nothing to be told that the Indian government needs the revenues arising from the traffic; that the rise of fully as destructive an agent—alcohol—is licensed at home; that opium gives relief in certain diseases; that the Chinese will get it any way; that those who protest against the whole trade are fanatics. These as statements may, or may not, have a basis of truth, still they do not really touch what we consider the main questions at issue, viz., the morality of the trade, and whether the effects on the whole are pernicious or otherwise.

The Report practically says that those opposed to the opium traffic have exaggerated its evils, and that the testimony of missionaries who mix continually with the people is less reliable than that of others chiefly in government employ.

If we, as an association, quietly swallow this Report many will suppose that opium is the same "blessing" to China that it is *said to be* to India, and we, to say the least, will "loose face" over the stir we have made in so vehemently protesting against it.

Personally I believe that for the credit of Christianity England should have nothing to do with the trade, and that opium to-day is, if not the greatest, at least one of the greatest, of "China's sorrows"; that the deterioration of this great empire, the absence of conscience in its officials and of *morale* in its soldiers, has as one of its vital causes the ever increasing use of this drug. More rapidly even than alcohol it strikes at the nervous centres, destroying the moral stamina of its victim even before its effects are physically evident.

As I think most, if not all, the medical missionaries in China hold these opinions our Association should speak with no uncertain sound against a Report thus minimizing an evil which, here at least, is inflicting a moral and physical wrong.

As any action of the Association depends on the wishes of the majority I trust that each member will communicate with some one of the following committee, stating what he individually considers to be the best course for the M. M. Association as a body to take. Shall the above Report on opium be, or shall it not be, officially protested against?

Thus guided the committee can draw up a set of Resolutions covering the whole question and present them in the next number of the Journal. I would suggest that when writing to the committee statistics and proofs from direct experience be also added, thus giving the members facts upon which to base their series of Resolutions.

I will ask Drs. Kerr, Main and Douthwaite, with Dr. Hodge as Secretary to act on the above mentioned committee.

Pekin, June, 1895.

B. C. ATTERBURY,
President, C.M. M.A.



Dr. NEIL MACLEOD, the China Secretary of the Congress, has forwarded us the following for publication in our Journal:—

THIRD INTERNATIONAL CONGRESS OF
DERMATOLOGY.

To be held in London from August 4th to 8th, 1896, *both days inclusive.*

Regulations.

(1.) All duly qualified * medical men, British or foreign, or others interested in science, invited by the Council, who shall have paid the fee of £1 (a) sterling, and who shall have enrolled themselves shall be members of the Congress and entitled to the Volume of Transactions.

(2.) The official languages of the Congress shall be English, French and German, but with the permission of the president members may express themselves in the language with which they are most familiar.

(3.) The proceedings of the Congress shall be embodied in a Volume of Transactions, edited by the Executive Council.

(4.) Communications relative to membership, papers, or other matters connected with the Congress, should be addressed to the Secretary-General, Dr. J. J. PRINGLE, 23 Lower Seymour Street, London, W., or to one of the foreign secretaries.

(5.) The fee for membership shall be payable in London at or before the opening of the Congress.

It will greatly facilitate the work of the Executive if the fee is forwarded as soon as possible after the 1st May, 1896.

(6.) Members who are unable to attend the Congress shall receive the Volume of Transactions.

(7.) The subjects treated of shall be of two orders:—

I. Those selected beforehand by the Executive Council and introduced by gentlemen chosen for that purpose by the Council.

II. Those selected by individual members themselves.

(8.) Subjects selected for debate by the Council shall take precedence over those selected by the members.

(9.) The sittings of the Congress shall take place from eleven to one in the forenoon and from three to five in the afternoon of each day.

(10.) There shall be clinical demonstrations of patients every morning from nine to half-past ten and every afternoon from two to three.

(11.) Members contributing papers must submit an abstract of them to the Secretary-General on or before the 1st May, 1896, which will be printed either in full or in part and embodied in the general programme of the Congress, which will be distributed at its opening.

(12.) At every debate precedence will be given to gentlemen who have communicated beforehand their intention to take part in it.

(13.) No papers lasting more than twenty minutes will be permitted. Speeches will be strictly limited to ten minutes each. Manuscripts of the papers read must be left with the Secretary-General before the end of the sitting. The Executive Council shall decide as to the entire or partial publication of such papers in the Transactions of the Congress.

J. J. PRINGLE,
Secretary-General.

(a.) The equivalent of £1 sterling is: French, 25 Francs; German, 20 Marks; Italian, 25 Lire; American, 5 Dollars.



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No. 3.

Original Communications.

[No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editor on the first day of the month preceding that in which they are expected to appear. The editor cannot undertake to return manuscripts which are sent to him. A complimentary edition of a dozen reprints of his article will be furnished each contributor. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.]

SELF-SUPPORT IN MISSION HOSPITALS.

J. G. KERR, M.D.

The papers by Dr. Whitney and Dr. Atterbury in recent numbers of the *Medical Missionary Journal* on the subject of pay for treatment in missionary hospitals and dispensaries present most of the arguments and objections to be advanced for and against this plan; and it is clear enough that, from the common standpoint, there is much to be said on both sides. But it must be remembered that medical missions are to be viewed and prosecuted from a higher standpoint than has been taken in this discussion or than has been taken by mission secretaries and the Churches in general.

The term *humanitarian* is applied to the work of the medical missionary by those who depreciate its importance, as compared with preaching and teaching, but we do not find any such distinction in the teaching of our Saviour.

Healing the diseases of the body was a supremely important part of His work. We have in the Gospels the record of the methods of our great exemplar in His miracles of healing, and the objects He had in view are clearly set forth. The healing of disease was a means to an end, and that end was not merely to remove prejudice, gain favour and commend the Gospel. The great object to be accomplished by healing disease was to *convince* men. It was *necessary* for our Saviour to convince men :—

1st. Of the divinity of His person.

2nd. Of the heavenly origin of His doctrines, and

3rd. That His religion was one of beneficence; that its chief characteristic and moving power was love.

Supernatural power was indispensable to accomplish the first object; and because of the *short period* of His ministry it was an important aid to the second and third. From an unlimited number of means at His command the Saviour chose the miracles of healing as the means He would use in the establishment of true religion among mankind.

Supernatural power is not now required to convince men of the heavenly origin and beneficent nature of Christianity, but it is the province of His disciples, by works of mercy and ministrations of love, to demonstrate that this religion is one of love.

The ministry of healing is by divine arrangement peculiarly adapted to present to the heathen evidence of the heavenly character of Christianity which cannot be gainsayed, and it carries conviction alike to the wise and the ignorant.

In view of the fact that the work of the medical missionary is the evidence to the heathen of the exalted character of Christianity—the proof that it is a religion of love and mercy, and so differs from all other so called religions, it is necessary that we should avoid everything which could in the least vitiate that evidence or weaken its force.

It needs no argument to show that practising for money, or fixing a price for services rendered, must of necessity present to the Chinese mercenary and selfish motives which would counteract the great purpose of the work and take away the very element which gives the work of the medical missionary any relationship to that of the Master.

In other words a surgical operation performed for a stipulated sum will be to the heathen mind an evidence of mercenary and personal motives, thus taking away from the healing of the sick that which gives the missionary physician his power as a co-worker in Christian missions.

The Churches at home devote millions of dollars to the establishment of magnificent hospitals, where hospitals are already numerous.

It is a duty the Churches may not evade to supply the comparatively small sums needed to carry healing where unnumbered thousands are suffering and dying with no means of relief at hand, and where these works of mercy and of love are the very arguments needed to convince men that the ministers of the Gospel seek the salvation of souls and not money. It is right and desirable that those who receive benefit at the hands of the missionary physician should aid in supporting his work, but it must be *voluntary* not *enforced*. There is wide range for the exercise of judgment and tact in the methods which may be used to secure aid to medical work in mission fields, and in many hospitals there are examples of generous gifts from those who have not as yet accepted Christianity.

Unselfish, faithful, persevering devotion in behalf of suffering humanity, with the blessing of Him who has commissioned us to preach the Gospel and heal the sick, is a power which must not be lost in the great battle for the salvation of the world. The Churches at home are gradually awaking to the importance of our work; let not those of us who have come in obedience to the Saviour's command by any act of ours weaken or vitiate the influence of our work.

Note.—The Medical Missionary Society's Hospital in Canton was, when it began over 50 years ago, supported entirely by Europeans. In the course of time, as its object and usefulness became known, the Chinese began to contribute. Last year's Report shows that a large part of the income is derived in various ways from Chinese sources; the items being as follows:—

Foreign subscriptions	...	...	...	...	...	\$712
Whampoa Bethel Fund (foreign)	...	...	...	...	...	300
Chinese Subscriptions	...	...	...	...	...	922
" " officials	...	...	...	...	...	680
Room rent (voluntary)	...	...	...	...	...	600
Entrance fees (required)	...	...	...	...	...	209

RETENTION OF PLACENTA FOR THIRTEEN DAYS. HOUR-GLASS CONSTRICTION, SEPTICÆMIA, RECOVERY.

By A. W. DOUTHWAITE, M.D.

Mrs. Tai, age 28 years, primipara, gave birth to a child on April 18th, 1895, about 4 a.m.; whether the child was born dead or died soon afterwards I was unable to find out. At 11 a.m. I was sent for to remove the placenta, as the midwife having broken the cord "had nothing left to pull at." On arrival I found the patient sitting on a brick bed, propped up by two old women, while a third had her right hand in the vagina, "holding on," she said, "to the placenta, to prevent it being dispersed into the body." On making an examination I found the os elongated and flabby (for it was that to which the attendant had been "holding on" for several hours) and hour-glass constriction of the uterus so rigid that all the force I dare use made no impression upon it. I then put the woman thoroughly under chloroform, and made another attempt to reach the fundus, to which the placenta was firmly attached; but in vain, for the stricture would not yield, although my hand became exhausted by the force used.

I ordered injections of hot water, and gave a dose of chloral hydrate, and on the following day called in the assistance of Miss Dobson, a qualified midwife, hoping that with her smaller hand she would be able to accomplish what I had failed to do. Chloroform was again administered, but again we failed to reach the placenta, so we decided to try the effect of frequent injections of hot solution of potassium permanganate. Morphia was given hypodermically once a day, and chloral was again tried, but the hour-glass constriction would not relax, and in a few days it became difficult even to pass the pipe of the douche. All hope of removing the adherent placenta *en masse* was abandoned, so I ordered the uterus to be thoroughly flushed five times a day with hot solution of "Condy," to remove the placenta as it began to slough away and prevent the retention of septic material. On the fifth day the patient had a rigor followed by a rise of temperature to 104°, but her pulse remained good, and she took nourishment well. The following day her temperature fell to 101°, and remained about the same till the eleventh day, when after a severe rigor, it suddenly rose to 106°; pulse 160; abdomen swollen and tender. On the thirteenth day a large piece of placenta came away, but I did not see it until it had dried, so could not correctly estimate its original size.

For a few days afterwards the patient was in a critical condition, but gradually the temperature fell, appetite returned, and convalescence was established.

It is remarkable that all through the case there was no offensive discharge, and the water used in flushing the uterus was returned with only the slightest change in appearance. Miss Dobson continued in attendance on the case, and to her care the patient doubtless owes her life.

MEDICAL REPORT ON THE EPIDEMIC OF BUBONIC PLAGUE IN HONGKONG.

(By JAMES A. LOWSON, M.B., *Medical Officer in charge of Epidemic Hospital.*)

Doubtless many of us have been waiting for an adequate account, from a medical point of view, of the bubonic plague epidemic in Hongkong last year. This has come to hand at last in an interesting and able report to the Hongkong government by Dr. Lowson. It is in the form of a blue book issued by the government and extending to 58 pages. In Dr. Lowson's letter of submittal he refers in strong terms to the Tung Wah Hospital, denouncing it from a professional standpoint as constituting a serious menace

to the health of the community. This hospital is run by the Chinese under government supervision. Two years ago I visited it and was struck with its cleanliness and order as evidencing the overseeing eye of government, but according to Dr. Lowson it has been weighed in the balance and found wanting. Such an institution under Chinese management will be satisfactory in direct ratio to the amount of foreign supervision.

According to investigations Dr. L. had made, and contrary to the teachings of the text-books, the first record of bubonic plague in China was in 1844. There was an epidemic in Canton in 1850 and not again until 1894. It has been endemic in Yunnan since 1873, and in Pakhoi for over twenty years.

Dr. Lowson is of opinion that the epidemic began in Canton early in Feb., 1894. Perhaps this is a misprint for Jan., for two paragraphs below he says that from Jan. 1st to May 1st, 1894, tens of thousands of persons died of plague in Canton. Certainly the latter date seems more correct, for Dr. Niles' first case was seen Jan. 16, 1894 (vide *M. M. J.*, p. 116.)

The usual mortality among rats was noticed, but there was no proof that pigs, cattle and dogs were affected. This is also our experience in Swatow this summer, and is at variance with what has been noticed in other places, e.g., Yunnan. Can our Canton friends tell us how it was there?

Our author defines bubonic plague as "a specific infectious fever, characterised by the presence of a definite bacillus, primarily affecting especially the lymphatic system, and afterwards the cerebral and vascular systems." Among the important factors in the spread of the disease he includes the bad condition of the latrines, and blames them not only for affecting those who used them, but also the neighboring houses. If the latter statement can be proved they must have indeed been virulent foci of the disease.

The dryness or humidity of the atmosphere is stated to have had little effect on the progress of the plague. It is, however, noticeable that the winter and spring of 1894 and 1895 were exceptionally dry, and in the former year the plague prevailed in Canton and Hongkong, and in the latter at some of the neighbouring coast ports. It stands to reason that the accumulation of dirt in Chinese towns during a prolonged dry season renders them better fields for the propagation of the disease. That an actual increase in the severity of the plague should follow rain is explainable, as our author suggests, by the rise in the subsoil water and by the people being driven in to sleep in the houses instead of the open air.

Bacteriological investigations cut down our ideas of the mode of infection. The poison is only proved to be given off in the faeces, blood and contents of buboes. It is not given off in ordinary respiration. Infection

takes place by inoculation, inspiration and introduction to the stomach, the last being infrequent. A prominence is given to inoculation which would seem rather too great.

In discussing the clinical history some new light is thrown on the petechial and purpuric spots which have heretofore been associated with plague. The evidence goes to show that they were in the first place caused by mosquito bites and were due to the state of the blood. "One day they appeared as typical mosquito bites, the following day they looked like hæmorrhagic spots." On the *Hygeia*, where there were no mosquitos, they were not seen, and in the hospital they did not appear on the parts covered by the clothes. Dr. L. insists that the word *carbuncle* should be expunged from plague literature as they are really buboes or hæmorrhagic blisters. Reference to Dr. Lubbock's article in Davidson's book would seem to bear him out in this, for the carbuncles there described correspond fairly well to Dr. Lowson's description.

An account of the examination of the blood for the bacilli, discovered by Dr. Kitasato, follows and their diagnostic value is dwelt upon.

Prophylaxis is next considered, and it is noted "that none of those who were in active attendance on, or engaged in, removing the sick during the whole period were attacked." This is attributed to the instructions given at the beginning. Nothing is said of the risk to those engaged in cleaning the houses and the cause of the Shropshire men's infection.

Treatment may be summed up in:—calomel grs. x. to commence with, and then treat symptoms; avoid depressants; stimulate freely when pulse becomes dicrotic; tepid sponging for hyperpyrexia; morphine, hyoscyn and ice-bag for insomnia. Salol proved the best remedy for diarrhœa, and strophanthus answered better than digitalis.

The mortality figures are most interesting and instructive. Chinese 93.4 %. Indian 77 %. Japanese 60 %. Eurasian 100 %. Europeans 18.2%. It must be remembered, however, that only in the case of the Chinese were the numbers under treatment sufficient to enable reliable statistics to be drawn up. The relatively heavier mortality among women and children accords with our experience here, and the reason given, *i.e.*, that it is due to their confinement to the house, is undoubtedly the right one.

Immunity to plague on the part of opium smokers was alleged by some, but Dr. L. emphatically denies this.

The last twenty-three pages are occupied with clinical cases of the greatest interest and value.

It is worthy of notice that both Japanese doctors acquired the plague through dissection wounds. It is pointed out that there is a greater tendency to heart failure in Asiatic patients than in European.

Wisdom is easy after experience has been gained, but it strikes one that depressing treatment in fevers must have been rather in vogue in Hongkong, and that the cardiac virtues of strychnine had not been held at their usual estimate before the epidemic.

The report is a most valuable one, and should be in the hands of all our members.

P. B. C.

Swatow, June, 1895.

A CONTRIBUTION ON MEDICAL NOMENCLATURE.

BY A. MORLEY, L.R.C.S. AND P.E.

In attempting a system of scientific nomenclature in Chinese, precision and brevity can scarcely be hoped for in their perfection, except by Dr. Faber's ideal of a separate character with no other meaning, for at least every separate genus if not species: but this almost means the forming of new characters, which we can scarcely expect to see until native men of science have sufficient authority to form a sort of native French academy. But, fortunately for us, medicine, of all the sciences, has perhaps the least need for new characters: the species of disease are after all comparatively few; and the number of characters applied to diseases is comparatively large. We may say of medical terms in Chinese pretty much what Dr. Legge said of the plants in the Books of Odes; there are names enough but little botany. For our purpose this is an advantage. A glance through the dictionary will show a vast number of little used characters, names of diseases which have been very little defined: many of them have not so much two meanings, one of which has to be got rid of, as only one meaning ill-defined; they are like definitions in solution ready for crystallization. I grant that in giving to these airy nothings a local habitation and a name we must have something of the fine frenzy of the poet; but in doing it we shall not only facilitate our own labours and add precision to the Chinese language, but we shall also enrich it by doing away with the monotony of this void and filling it with real shapes. I have therefore looked through some of the radicals in K'ang Hi's dictionary, noting those characters which seemed to be available for our purpose, and accepting two principles: 1st, a single character for every generic disease; 2nd, this character to have no other meaning, either technically or colloquially; which implies that no character be used which is too colloquial, and therefore too heterogeneous in its meanings, and as far as possible none which is used in an ethical sense. On the eve of departure for England I have not the leisure

to go through the dictionary again to fill some gaps still left ; and I offer this merely as a suggestion, conscious that it might be much improved by reference not only to the dictionary but also to native medical works.

I need scarcely add that any such system as this is meant only for books ; but if we are to have a scientific description of diseases in Chinese we must have some such system of purely technical nomenclature. Dr. Kerr's list will do very well for colloquial except in a few antiquated classifications which he seems to follow ; but in more technical colloquial—if the phrase may be allowed—it would probably be sufficient merely to add some such word as 瘡 or 癬 to the character used in books.

In the list below the characters bracketed may perhaps be dispensed with.

A. SYMPTOMS. Some colloquial characters may be used here :—

Eruption, 瘡, is the colloquial for any skin disease from a rash to an ulcer,

Macula, Petechiæ,

Contusion, bruise ; 傷 癰 would probably do ; but 瘡 is a sore caused by beating,

Papule : Dr. Kerr has 痱 粒, but 痱 he properly uses as the specific name for prickly heat, and it should not be used adjectivally for a papule. Our colloquial word is 疔, which is applied to a papule or a shotty gland. A minute papule might be 粒,

Pauphi,

Vesicle : 泡 is often interchanged with 皰 (also written 疱), both being read P'ao⁴,

Pustule,

Bulla, 皰=skin raised,

Excoriation : 疔=sore from scratching,

Ulcer,

Fissure : 皸=a crack in the skin,

Scale : For squama Dr. Kerr uses 癬 ; it is a tempting word ; but the dictionary does not mention scaliness as a symptom of the disease ; in our colloquial it is used chiefly for tinea, but not for such scaly eruptions as psoriasis. 皸 is loose skin, epidermis, scurf,

Crust, *Scale*. Our colloquial is 痂子, but Dr. Kerr's 痂 seems to be the more correct,

Canedone should be taken as a variety of crust,

Edema,

Induration : According to Morrison 痂 is "a hard swelling,

瘡.
癰.
瘡.

疔.
團.

皰.
疹.
皰.
疔.
疽.
皸.

皸.

痂.
油 痂.
腫.

a local adhesion of the parts." K'ang Hi is less definite,

Wrinkles,

B. DISEASES:—

1. Functional.

i. Pruritus: Dr. Kerr gives 癢; but it is probably the same with 痒, and so should not be used for any particular disease. The dictionary has 疥 as meaning 疥, 'to gnash'; it is used for to itch, and not being much used may be restricted in our books to pruritus,

疥.

ii. Prurigo of Hebra: Little is known of the etiology of this disease; but whilst I have here called it the rough skinned pruritus referring to the minute papules of the disease, I admit that it is probably quite distinct from pruritus. Other characters might probably be found available,

皸疥.

iii. Atrophy: Scarcely requires a name.

iv. Albinism: 白屑 seems to be colloquial.

v. Vitiligo (Leucoderma): Dr. Kerr refers to albino!

皤.

vi. Lentigo (Freckles): Dr. Kerr under 'Sunburn' gives 曬黑. 黑 must be taken adjectivally, and so 曬 can only be a verb='to scorch dark;' but we want a name. It is a variety of macula, scarcely a disease,

曬癍.

vii. Ephelis (Chloasma).

viii. Mole: is a melanosis.

ix. Addison's disease: not essentially a skin disease, but 黧 is a black skin.

Of the hair:—

x. Hirsuties: Dr. Kerr gives 髮多 'much hair on the head'. 髻 means the same, and indicates the whole body,

髻.

xi. Alopecia: Dr. Kerr gives 癢, an 'itching of the head,' and is probably thinking of ring-worm. Believing alopecia areata to be parasitical I look upon all alopecia as symptomatic; if, however, a special character be needed; 髻 is baldness,

髻.

A. Areata: v. Tinea Decalvans.

xii. Abnormalities of the hair: The etiology of these diseases is uncertain, and I will class them together. 髻 is perhaps the best general word to use; it appears to mean merely an unhealthy condition of the hair; if special characters be required for each there are plenty which may be appropriated.

Fragilitas Minium,

脆髻.

Trichorexis Nodosa,

節髻.

Trichonosis Versicolor,

華髻.

Cavities: Symptomatic,

鬆髻.

Of glands. Here it is difficult to find characters sufficiently precise; so I have named these diseases anatomically.

xiii. Miliun (Strophulus),	油 [核] 癩.
xiv. Seborrhœa (Acne Sebacea),	油 [核] 癩.
xv. Acne (A. dissem : A. vulgaris),	油 [核] 炎.
xvi. Ephidrosis (Hyperidrosis),	汗 [核] 癩.
xvii. Sudamina (Miliaria),	汗 [核] 癩.

[Perhaps in the above the character 核 may be omitted].

2. *Inflammatory* :—

i. Erythema,	癰.
E. Capitis (Pityriasis Capitis),	頭 癰.
E. Circinata (Roseola, &c.),	輪 癰.
E. Strophulus (Lichendis),	粒 癰.
E. Punctatum,	紅 癰.
E. Laeve,	腫 癰.
E. Intertrigo (Intertrigo; Eczema Eryth.),	向 癰.
E. Pernio (Chilblain),	疥 癰.
E. Papulatum (E. Multiforme of Hebra),	對 癰.
E. Nodosum,	疔 癰.
Urticaria : I would take as an erythema,	團 癰.
U. Conferta,	密 團 癰.
U. Febrilis,	熱 團 癰.
U. Perstans,	重 團 癰.
U. Nodosa,	疔 團 癰.
ii. Lichen Tropicus,	癩.

iii. Eczema : Dr. Kerr has 水 蛭 癩, 'a watery grub eruption,' and he uses 癩 in Ascarus Ecthyma, Herpes and Eczema. The dict. simply calls it 惡 疾. Dr. Legge (v. An. vi. viii) says that it formerly, i.e., before Choo He's time, meant 'leprosy,' but now 'the itch.' In Hupeh colloquial it does not seem to be used for leprosy, and the dict. knows of no such meaning; in our own colloquial it is applied to any moist or pustular itching skin disease, and is the only specific name which I have heard applied to eczema. Being colloquial it should not be used for our purpose. 癢 is a severe skin disease with itching,

E. Erythematosum : v. Erythema Intertrigo.	癢.
E. Papulosum (Lichen : Eczema Lichenoides), i.e., an eczema in which the lesion is a papule,	粒 癢.
E. Vesiculosum,	皰 癢.
E. Pustulosum (Impetigo),	疹 癢.

Impetigo Contagiosum of Tilbury Pox,

E. Sclerosum,

E. Marginatum of Hebra: v. under Tinea.

染疹癩
皴 or 皴癩.

iv. Erysipelas is certainly pythogenic, and should probably be classed under fevers. 癰 is heat in the skin, and read *yin* it is a swelling, and so might do for erysipelas,

癰.

v. Herpes: Dr. Kerr has 大水蟲癩, which in his own terminology would mean 'a large eczema' (v. under Eczema). The dict. gives 癩 (v. 瘦) as a sudden breaking out of spots, 點, of between the size of a bean and a grain of wheat.

癩.

H. Facialis and H. Preputialis (Hydroa Febrilis),

孔癩.

H. Iris (Hydroa),

華癩.

H. Zoster,

[腦] 筋癩.

vi. Pemphigus (Pamphylex); 癰 is a rising of the skin,

癰.

P. Vulgaris (P. Dintinus),

當癰.

P. Foliaceous,

[周] 痂癰.

vii. Pityriasis Rubra.

viii. Lichen Ruber (Lichen planus of Wilson).

ix. Rosacea (Acne Rosacea; Gutta Rosa): Dr. Kerr has 紅暗瘡, 'red acne,' and 酒蟲, 'wine grub;' but it is in no wise an acne. 齧 is a red nose from cold or liquor,

齧.

x. Ecthyma and Rupia are to be taken as symptoms.

xi. Furunculus: 癰 is colloquial, but with us, and seemingly in books, is purely definite,

癰.

Carbuncle: 癰 seems to be an aggravated 癰,

癰.

Pustula Maligna,

牲癰.

xii. Psoriasis: In 癰 the skin is said to be scaly,

癰.

P. Punctata et Guttata,

點癰.

P. Nummularis,

塊癰.

P. Circinata et Gyrata (Lepa),

連癰.

P. Rupoides,

[尖] 痂癰.

3. New Formations:—

i. Callosities, 癰 is hard skin on hands or feet,

癰.

Calvus,

釘癰.

ii. Lichen Pilaris (Pityriasis Pilaris; Hair Lichen),

毛囊阻.

iii. Verrucæ,

癰.

iv. Ichthyosis,

皴.

I. Cornea,

角皴.

v. Scleroderma Adulorum (Addison's keloid; hide bound). 疔 is defined as 急貌, which I suppose means the app. of tenseness; it is not a very good word, but being little used we may give it a slightly new meaning,

S. Morphœa,

疔.
蠟疔.
胎疔.

S. Necutorum: Here I follow the English name,

vi. Rhinoscleroma.

vii. Xeroderma.

viii. Elephantiasis: The Chinese have several characters for swelled legs, as 症, a disease of lower parts of body (Morrison), but we want one to include Lymph Scrotum, so I would suggest an anatomical term,

吸管瘰.

ix. Frambœsia (Yaws: Pian).

x. Leprosy: 痲瘋 would do well, but neither character is admissible by itself. 癩 appears in some places to be used colloquially, but cf. under Eczema; as a tentative suggestion I will write 瘰, a chronic disease, probably the same with 癩; but a distinction might be made,

Tubercular Leprosy,

瘰.
疔瘰.
痲瘰.
癰瘰.

Anæsthetic do.

Macular do.

xi. Ainhum.

xii. Madura Foot (Mycetana; fungous foot),

跣.

xiii. Pellagia.

xiv. Molluscum Contagiosum.

xv. Molluscum Fibrosum,

癰.

xvi. Vitiligoidea (Xanthasma).

xvii. Cheloid,

瘰.

xviii. Nævus,

瘰.

xix. Rodentular,

癰.

4. Hæmorrhages:—

i. Purpura,

瘰.

ii. Hæmidrosis.

5. Parasites (awaiting zoological terms.)

i. Tinea: In our colloquial 癬 is used almost exclusively for T. Circinata (v. under 'Scale'); it, however, may be found to have other colloquial meanings (Dr. Kerr uses it alone for both Serpigo and Pruritus and as the last character in 'Lichen,' 'Ichthyosis,' 'Pityriasis,' 'Psoriasis,' 'Pityriasis Ruber' and 'Prurigo'),

T. Favosa,

癬.
黃癬.

T. Tricophytma, Tonsurans, Circinata, Sycosis,	錢癬.
T. Versicolor,	斑癬.
T. Imbricata,	瓦癬.
T. Decalvans (Alopecia Ureata), probably parasitic, but its relation to Tinea is uncertain : so use 鬢,	掉鬢.
ii. Scabies : In our colloquial the common term is 乾癢癩,	瘡.
iii. Phthiriasis,	蝨.
Ped. Corporis,	衣蝨.
P. Capitis,	頭蝨.
P. Pubis,	蟹蝨.
6. <i>Diathectic</i> :—	
i. Lupus,	癩.
L. Exedens,	食癩.
L. Erythematosus,	癢癩.
ii. Lichen Scrophulosorum.	
iii. Scrofuloderma.	
iv. Syphilide.	

[The above paper was forwarded by me at Dr. Morley's request to Dr. Douthwaite for communication to the Terminology Committee. Dr. Douthwaite thinks it best that it should be published at once in the Magazine "rather than run the risk of losing" the original manuscript "by sending it to far inland stations where some members of the Terminology Committee reside ; and so by circulating it among the members of our Association the committee may have the benefit of their suggestions and additions." When Dr. Kerr's original list of medical terms was published last year the editor forgot to issue with it a request of Dr. Douthwaite's that each copy should be returned to him *within six months*, along with any suggestions or additions. Dr. Douthwaite wishes it to be known that if all who have received Dr. Kerr's list will return their revised copies (bearing in mind Dr. Morley's criticisms) to him *before the end of the present year* he will be able to make use of them before leaving for England in the spring of 1896.—EDITOR.]



BREVIA THEOLOGICA.

A distinguishing feature of our present-day theological literature is what might be called an upper middle class of magazine. Not many decades ago the theological magazines were sharply divided into those for "the classes" and those "for the masses." In the one class comments on the obvious were made for "Sunday-school teachers," "skeletons" were provided for addresses or sermons, "illustrations" from travellers and anecdotes, both old and new, filled up what would have been otherwise a useless blank. In the other class the aristocrats of learning waged learned duels, or wrote articles adorned with patches of all sorts of Oriental languages, except Chinese! Now-a-days either a "long felt want" is being satisfied, or what ought to have been a want" long since has recently become so, and the supply is as the demand. An excellent type of magazine has arisen, of which, in England, the *Expositor* was almost the first, and for some time the only example, but is now happily but one of quite a band of rivals. One may be excused for thinking that no class of reader can enjoy such magazines more than the missionary. A man who is obliged by the all-imperious demands of Chinese to view with dismay his college priming of a little Greek and less Hebrew gradually diminishing rather than increasing, is exactly suited by the gentle stimulus of the aids to understanding the Holy Scriptures which now lie at his hand.

Last year a controversy occurred in the pages of *The Thinker*, which must be of interest to both medical and clerical readers alike. In May and June the Rev. W. Warren, M.A., appeared well laden with spoils which he had won by a few skirmishes on the fields of medical Greek. He honestly told us that he was but a tyro in that particular branch, and made no claims to be regarded as a specialist. He had merely gathered a few illustrations "from a chance opening of Greek medical works" which he had never before consulted, and to which he could find no good index.

On reading the articles I could not but make a few jottings for the *Medical Missionary Journal*. But, alas for the amateur who rushes into print. The specialist was not long in forthcoming, and in September and October a disappointed warrior—the Rev. F. T. Penley, M.A.—gave us his experience to warn us from thinking that medical Greek would prove an interesting "by-path to Bible knowledge," or at least a by-path to the better understanding of the works of St. Luke, "the beloved physician."

Mr. Penley writes : "When I began the study of Greek medical language I was buoyed up with the hope of finding some indubitable (marks of St. Luke's profession) in the Third Gospel or Acts. I have come reluctantly to the conclusion that they do not exist." He gives a somewhat severe—though if one who feels quite an outsider in the matter may judge from the facts which are alleged, not unjustly severe—treatment to a book which doubtless many readers of this magazine are familiar with : "The Medical Language of St. Luke," by the Rev. W. K. Hobart, LL.D., of Dublin. He believes that both Dr. Hobart and Mr. Warren have fallen into the trap of not distinguishing between the mere use of words which occur in medical works and the correct use of technical terms which, of course, would alone be the distinguishing marks of a medical man. The former class of words Mr. Penley admits St. Luke to use, but he qualifies the admission by adding that "Josephus is undoubtedly richer in medical terms. . . . Philo much more," and that "one literary author remains who surpasses both Josephus and Philo"—"that garrulous Greek," Plutarch. The latter class of words Mr. Penley, "as one who has devoted several years' study to the Greek medical works extant and to the leading authors of contemporaneous literature," regrets that he has searched for in vain.

Not content with this merely negative conclusion our author makes the surprising positive assertion that St. Luke actually uses medical terms in an unscientific manner, *e.g.*, in Acts i. 18 "in the account of the death of Judas Iscariot, St. Luke, following, no doubt, the Septuagint, uses the word *σπλάγχνα* for "bowels" as is evident from the meaning of the verse. This is medically incorrect. *Τὰ σπλάγχνα* are the seven viscera enumerated by Aristotle and Philo, and referred to by Galen. The proper word should be *τὰ έντερα*."

"Another popular expression is *πυρετός μέγας* (Luke iv. 38). The complaint from which Peter's wife's mother was suffering was doubtless marsh fever. To this day this complaint is very prevalent in the seething plains of Capernaum. In that case Greek medical language had a recognized nomenclature for its various forms. *πυρετοὶ μεγάλοι* was not one of the recognized forms. *Μέγας* is quantitative and not qualitative when joined to *πυρετός*, and Galen blames those who so use it. Dr Bernhard Weiss (*Introd. N. T.*, ii., p. 312) says that to profess to discover traces of medical knowledge in these words of St. Luke is mere trifling."

Two general points noted by Mr. Penley are of interest. "Firstly, down to their final overthrow there was no such thing as medical science among the Jews. While flourishing in Greece for five hundred years B. C. the Jews did not advance beyond magic and exorcism (Dr. Stapfer). Hence its adepts are reproved in Scripture (2 Chron. xvi. 12 ; Acts xix. 13), or

spoken of with contempt (Luke xiv. 23 ; viii. 43). There is not a single rational medical cure related as taking place in Palestine, either in the Bible or in the Talmud. Tobit's cure of cataract (xi. 13) occurs far from the Holy Land. The treatment was medical (cp. Dioscorides, *Mat. Med.*, ii. 96); the revelation of it supernatural—a concession no doubt to Jewish prejudices.

“Secondly, when the Jews of the Dispersion came in contact with the ubiquitous Greek they began to learn and value medical science. In a later book, probably written at Alexandria, Jesus, the Son of Sirach, enriches his didactic work with rules of health (xxxi. 21, 22), indications of pathology (xxiii. 16 ; xxv. 15) and an encomium on physicians (xxxviii. 1-15).”

(That last section, by the way, is very interesting. It is appointed to be read for the first evening lesson on St. Luke's day (Oct. 18) in the English Church Lectionary.)

Of course it by no means follows that because St. Luke did not make a technical use of medical terms that therefore he could not so use them. In one sense we may all join Mr. Penley when he says: “It is a matter of regret that St. Luke is so reticent about himself.” And yet, in another and truer sense we may feel that it is well to be thus. The one absorbing theme of the Gospel has led four men to write us four books in such a way as to show us just what is meant by that great word, which the third of the four (whom we call above all others *the* evangelist) has recorded for us, “If any man would come after me, let him deny himself.”

G. G. W.



The China Medical Missionary Journal.

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No. 3.

The answer which Dr. Neal has given to a query which appeared in the March number of this magazine brings us face to face with an important and not very creditable truth. This truth is the indisputable fact that the committees appointed by the medical conference of 1890 have practically done no work. That conference appointed six committees, viz., on "Collective Investigation of Disease," "Chinese Materia Medica," "Chinese Medical Nomenclature," "The Preparation of an English Tract upon the Opium Habit and its Treatment," "An Appeal for two Medical Men in each Large Centre," and upon "The Relations of Non-qualified Missionaries and the Recognition of Native Assistants." As Dr. Neal points out only one committee, that on Nomenclature, has done anything at all. It is not sufficient to bewail this fact; the thing to be done is to endeavour to show the causes which, in our opinion, have led to this state of things and next to indicate what can be done, even so late in the day as now, to set this machinery to work.

First, then, it appears to us that one cause of failure may be found in *the number of committees elected and the number of subjects appointed to be dealt with*. The great majority of these committees, if they did their work properly, would have to communicate with a large number of the members of the Association; their progress would have to be reported from time to time in the Journal, and their results, as so far attained, subjected to criticism before they could draw up any final report. Further, it is very desirable that members of a committee should at stated intervals meet for consultation and discussion, as it is almost impossible to do any collective work satisfactorily by correspondence. When one considers the long distances that separate us, and the long intervals that in many cases must elapse before any interchange of views can be effected, this desirability becomes an almost absolute necessity. These difficulties might possibly have been overcome had a less ambitious programme been adopted, and only one, or at most two, committees been appointed.

Next, *the same man was placed on too many committees*. One member of the Association is named on four, the names of three

others appear on three, and that of two other members on two committees. As the average number of members to a committee is five this means that three-fifths of half the whole number of committees consists of the same men. Remembering how overworked most of us are, what many duties other than strictly medical fall to our lot on a mission station, the impossibility of any good work being accomplished under such conditions is obvious.

Again, *the committees were, as a rule, too large, and their members too widely separated from one another.* One committee has seven members, and two other committees have six each. Now the labour of a committee is rendered more difficult in direct ratio to its size, and when, as in this case, all work has to be done by correspondence this labour is increased many fold. A glance at the personnel of the committees will illustrate our point. We take one at random. Its members are scattered between Chefoo on the north-east, Han-chung in Shensi on the west and Canton on the extreme south. Imagine the time consumed in communicating with one another!

Members were nominated for committee without previous consultation. Of course this is a very usual method of procedure, but that does not make it a wise method. In several cases gentlemen who were not present at the conference were elected on committees, and small wonder is it if they have taken no interest in them. Only a small minority of large gatherings have sufficient public spirit to take up such work as these committees involved, and not sufficient pains appears to us to have been taken to find out that minority and utilise it.

Finally, *in only one case was a chairman of committee named,* and no one knows clearly now whose duty it is to take the initiative in the work. The probability is that there was some understanding on the subject at the time, but if so we cannot remember what it was. The fact remains that the only committee that has a recorded chairman is that on Medical Nomenclature, and it is a suggestive comment on our remarks that this is the only committee that has done any work.

It is very far from our intention to put the blame for these mistakes upon our then president but rather upon the general body of the conference. It is only by faithfully pointing out the failures of the past that we can hope for success in the future.

The question remains. What can be done? We venture to suggest the following scheme: (1.) That the president dissolve all committees but two, viz., that of Medical Nomenclature and that on Native Materia

Medica. (2.) That in the case of the second committee he appoint a chairman whom he knows would take up the work *con amore*. (3.) That the two chairmen fill up their own committees by weeding out such members of the present committees as decline to work and by co-optating other people who will. This proceeding might not be according to the constitution, but the fact is the constitution makes no provision for many things. If the president took such initiative action, and then submitted its result to the general vote for confirmation, we believe the spirit of the constitution would be kept. We shall have something to say upon the constitution another time.

The committee appointed by the president to take up the matter of the Opium Commission Report have been in constant communication with one another ever since. The plan agreed upon is to issue a series of questions to each member of the Association, and from their replies to formulate a number of propositions to submit to the vote of the Association. It is earnestly requested that every member will carefully and fully reply to these questions, that every reply be founded upon specified experience, and that immature or unsupportable expressions of opinion be avoided. *Facts*, not opinions or theories, are wanted. The list of questions will be in the hands of members soon after the present issue of the Journal. All replies should be in the hands of the Secretary of the Committee *not later than November 1*, as it will take some considerable time to collate them and draw up a series of resolutions. The secretary of the committee will be glad to receive any suggestions for the better furthering of the end we have in view.

Since last going to press the evil genius of the Chinese people has once more asserted itself in riot and murder. Szchuan has been temporarily cleared of its Protestant missions, and Fukien has stained its soil with the blood of defenceless women and children. Our deepest sympathies go out to those who have been driven from their homes, to the little children maimed for life and orphaned, to the survivors of that terrible tragedy at Wha-sang and to the Church Missionary Society and its friends. But chiefly we mourn and fear for this people, upon whom has been poured the wealth of Christian love. For over 70 years the Church of Christ has laboured in this land, healed the sick, cared for the lepers, educated the blind, tended the dying, provided for the last days of the aged,

taught the little children, rescued the orphans and proclaimed the acceptable year of the Lord. As we read the long list of crime and outrage prepared by the Rev. Timothy Richard the thought of another country that filled up its cup of woe rises to our mind, and unconsciously we repeat the lament of the Lord Jesus "O Jerusalem, Jerusalem, which killeth the prophets and stoneth them that are sent unto her! how often would I have gathered thy children together, even as a hen gathereth her chickens under her wings, *and ye would not!*" From such fatal stiff-neckedness may the Lord in His mercy preserve this people.

One has constantly to ask oneself when such scenes as these are enacted, Is there any lesson here for me or for the Christian Church? We think there is such a lesson in the Szchuan disturbances. We have long held the opinion that the Church views its medical missionary work from a wrong standpoint and propagates it, too exclusively, from one particular motive.


The utility, one might say in some instances the absolute necessity, of medical missions has slowly impressed the home Churches and led them, with very various degrees of zeal, to avail themselves of this branch of Christian service. But that which has caused the Churches, of late years, to embark on this fresh enterprize is the conviction that the medical missionary can go where the simple evangelist cannot, that he receives an almost universal welcome, and is altogether the most efficient means of preparing the way of the Lord. Foolish and exaggerated statements of the esteem in which the foreign doctor is held in China, a too exclusive dwelling upon successes and their impression on the populace, has caused people to forget that there are two sides to this shield. Whilst on the one side it is undeniable that medical work operates powerfully to remove prejudice and hostility, yet on the other side it must never be forgotten that it gives, and must give, however cautious one may be, abounding opportunities to ignorant and superstitious and malicious people to spread all sorts of evil stories. The removal of an eye to arrest sympathetic ophthalmia, or the amputation of a leg for a compound comminuted fracture, are deeds which, though they may be absolutely necessary, are powerful for either good or evil, and one can never be sure in which direction they will operate. This is true not only of hospitals conducted by missionary medical men but also of those benevolent establishments to which so many port doctors freely give their services. Now there can be no question that in Szchuan ugly stories

were afloat about the hospitals, that the medical men themselves, despite their many years of kindly work, enjoyed no immunity from attack, and that their hospitals were absolutely destroyed. No doubt there were hundreds in Cheng-tu who had received kindly attention and healing from the hands of the foreign doctors, and who took no part in the work of destruction; nay, who probably bitterly regretted it and possibly even remonstrated against it. But there, as a rule, a Chinaman's intervention stops, and the few who disapproved availed as nothing against the many who raged or abetted. How many of us can feel sure that under similar circumstances we and our work would not suffer the same fate? We verily believe the exceptions would be few, and this not because the Chinese are an exceptionally ungrateful people but because the mass of ignorance in any given place is so vast, and so easily worked upon, that evil stories always find a ready audience.

There is a danger that these facts, when once they are realized at home, may produce a reaction against medical missionary work. The most expensive of all our philanthropies, people will be in danger of withholding their subscriptions from an investment which yields such a questionable return. But the work of the Lord is not a business investment; our medical work is to be undertaken in the full conviction that we *shall* meet ingratitude, misrepresentation and opposition. To manifest the love of God to these people, disinterested love of which they know so little, the love which seeketh not her own—this is our aim. The faithlessness of the generation in which He lived never quenched the love of the Divine Philanthropist; the ingratitude of the nine healed lepers never caused Him to refuse the touch of His healing hand, and even the shout of that excited multitude which bore Him to death, a crowd that must have contained many and many that had received His gift of healing, but drew from Him the prayer, "Father, forgive them, for they know not what they do." "A disciple is not above his master, nor a servant above his lord If they have called the master of the house Beelzebub how much more shall they call them of his household". If the inspiring motive of our work is to get men into the Church, and not that full abounding love which looks on the multitude and has compassion on them, it will not survive such treatment as this; but Love "beareth all things, believeth all things, hopeth all things, endureth all things," and "Love never faileth."

The question as to what amount of caution should be used in our work, more especially pure surgery and operative midwifery, is one

upon which there may well be some difference of opinion. For our part increasing experience makes us, if anything, more careful. With so many possibilities of evil arising from our actions we fight shy of heroic measures, which under other circumstances we should feel free to adopt. We never undertake an important operation without a signed paper holding us free from consequences, and we never engage in any serious midwifery without fully explaining the risks and obtaining full consent to do what is necessary. Such care may not be necessary everywhere, but it is wise council to our young members, which every medical missionary of experience will confirm, to err on the side of caution. Seek not to be brilliant but *safe* operators.



Evangelistic.

An interesting article by a Chinese student appears in the May number of the *St. John's Echo*. It discourses on "The Relative Value of the Three Forms of Mission Work." It speaks first of Evangelistic, then of Educational and Medical. But we feel sometimes the three are so closely related in their nature, the motives that prompt to each kind of work being identical, and they are so intermingled in their working on the mission field that it is hard to fix the bounds of either, or to write of one department without touching on another. The persuasiveness of the methods used by Christ's disciples would be a very suggestive subject for study. "They worked with great patience," says the writer above referred to. "Ye have need of patience" must always apply to mission work, and perhaps not least to the directly evangelistic part of it. Mr. Yen concludes his article with the words:—"The question is really very hard and complicated; no man can be able to prove positively to which form Christianity owes the most . . . they are so closely allied as to be indispensable to one another."

The Report of the C. M. S. Hospital at Hangchow contains a record of patient, hopeful work. "Work is not less real, because there is not much apparent fruit," we are told. The evangelistic work and its results are thus described:—

"We all take our share in the regular services and direct Gospel work, but the burden of the preaching and teaching is borne by the three hospital evangelists, who give all their time to it. We have regular preaching to the out-patients, daily services with the in-patients, weekly meetings for enquirers, weekly meetings for assistants, students, nurses and servants. The evangelists also give much of their time daily to regular bedside instruction, teaching those who are willing to learn and talking to those who are eager to listen; they also visit the homes of all the patients who, while in the hospital, showed an interest in the Gospel. In this way we are able to keep in touch with many of the patients and deepen and confirm impressions made in the wards. This part of the work is most essential, and is bringing forth much fruit. The Chinese are 'in all things too superstitious,' and we find that when our patients return home to their superstitious surroundings they are liable to drift, and good impressions pass away like the morning cloud and early dew, if they are not followed up and regularly instructed in the Way of Life. We cannot speak of conversions by the hundred, but we can speak of a few (thirteen) who were brought into the Church during the year. For these tokens of blessing we thank God and take courage."

The free hospital and dispensary at Chefoo, with the "Red Cross" Hospital, has had unusual opportunities. Great stress of work has not crowded

out evangelistic effort. The paragraph from the Report headed "Evangelistic Work" we give in full:—

"While so busily engaged in attending to the material part of our patients we never lost sight of the fact that they had souls as well as bodies. Many listened attentively to the Gospel, and for the first time heard of a God of love. Several native Christians visited the wards every day, and while ministering to the comfort of the patients endeavoured to lead them to the Saviour. Through the generosity of the American Bible Society I have been able to present a copy of the New Testament to each soldier on leaving the hospital, and in every case the book has been received with expressions of gratitude. A few days ago I met one of the dismissed patients tramping homewards with no other baggage than a Bible, carefully wrapped in a towel, showing that he attached no small value to it.

In the dispensary the Gospel is preached every morning to the patients and their friends, while waiting their turn to pass into the consulting-room, and all who can read are presented with portions of Scripture or tracts.

Every morning at 8.30 o'clock the servants employed on the Mission premises, and such in-patients as can leave the wards, assemble for a short service in the hospital chapel, and on Sundays the Church members living in the neighbourhood also attend the services held morning and afternoon; thus we do what we can to scatter the seed of the Word of God, believing that in due time we shall reap, if we faint not. The subject of baptism, or "entering the religion," is never mentioned to the patients; our object being to lead them to God through Jesus the Christ rather than to add names to our Church register.

If their names are written in the "Book of Life" it is a matter of indifference to me what Church they join; but I always urge them to attach themselves to any body of Christians who may meet together in their district."

Herein is that saying true, "One soweth and another reapeth."

From an American magazine, the organ of the Presbyterian Church, we gather something more of evangelistic work in North-China. In this case it is the direct outcome of educational work. Elementary or intermediate schools are scattered through the province of Shantung, and these supply the normal school at Chefoo and the college at Tungchow with students. "Most of the graduates," writes Mr. Hayes, "have been employed as teachers in Christian schools, or are engaged in evangelistic work." "All these schools accomplish something in the way of direct evangelistic work." After referring to the influence of the pupils in their heathen homes Mr. Hayes resumes:—"Direct evangelical results, we believe, will continue to flow from this work . . . its instrumentality in evangelizing the people of Sinim will become more and more apparent."

M. A. P.

A TALE OF TWO SISTERS.

Yes, friends. Sisters of yours, not less related to you than each to the other, for their Father is your Father, and the Home where each several life journey will end is the same abiding one.

The younger we shall always think and speak of as "little San," although when she sadly left us she had completed her seventeenth year. She was a gentle, delicate child. Fatherless and motherless she knew no earthly care better than that of an aunt, who was only nominally her protectress, and one of whose disqualifications for that office was the opium habit.

San was brought to the mission hospital three years ago to be cured of diseased bone of the leg. For ten months she stayed; medical skill and careful nursing were lavished upon her, and the daughter of our native minister, then a nurse in the hospital, never failed in patient teaching of the way of life, or in constant kindly care. San endeared herself to all, and was grateful and happy. She went "home" again, and returned several times, wishing to be baptised, but her friends would not consent. Finally her ailment seemed to be quite cured, and soon after leaving us for the last time we heard she was engaged to be married. The mother-in-law was said to be very fond of San, and we hoped at least for comfort and kindness for the lonely little Christian.

Alas! Last Monday an urgent opium case was announced, and astonished and shocked we heard it was San. Two men carried her hastily in, drenched with water, bedraggled, and apparently lifeless. Stringent remedies with artificial respiration seemed, after a while, to take effect; her breathing improved, but at 2 o'clock in the morning the heart suddenly stopped, and the tired workers knew that no further effort would avail. And why, O why, we asked, could our little friend have done such a desperate deed as to take her own life? The day shall reveal it, and some know. "Devilry" said the doctor, not too strongly. A Christian girl in a purely heathen home! Sisters, come and see what it means. San had been exposed to the perils of such a home, but though she left us thus we must hope she is safer now and for evermore.

And the elder girl? She left us last evening. I am astonished as I look back to the time (not so long ago) when these girls and women seemed all alike to be unattractive and utterly *foreign*. They are foreign no more. One faith, one Lord, united work and prayer together make us to be no more strangers but very real friends. But what of Tin Shen and her home? She was betrothed in childhood. Her own family and that into which she

was to wed were all alike heathen. Tin Shen, however, attended our girls' day-school, and was one of the brightest and most promising scholars, and she believed the Gospel that she heard there. For a time she was pupil-teacher, and later entered the hospital to be trained as a nurse. Never was more unwearied worker than she, soon becoming invaluable. She joined the Church early in her hospital course. But her friends began to talk of her marriage. She was eighteen. Every effort was made to arrange matters, so that she might, as she earnestly desired, be freed from the engagement. There was a quarrel between the two houses and a lawsuit, and we hoped a release might result. But no, a time was fixed, and with suspense, and hope, and fear, Tin Shen grew pale and thin and lost all her buoyancy of spirit. "I shall wear white," she said (the Chinese mourning.) They would try to induce her to bow to the idol, without which ceremony the marriage is not supposed to be complete. "I worship the idol!" exclaimed Tin Shen as we spoke of it, and we were sure she would not. Last night we bid her farewell. They sent for her from her mother's house about nine at night, the marriage to take place to-day. We went with her to the street gate, which was as far as we might go, commending her to the care of Him who has said, "I will never leave you."

1.

Her wedding day! no joy bells ring,
The parting hymn
With tears we sing
Unlit by smile.

2.

"She will array herself in white,"
Yes, festive red
When joy is dead
Is mockery.

3.

"The pure in heart are blest" we say
"Crown follows cross,
Heaven's gain earth's loss
We'll kneel and pray."

4.

In darkness doth Faith's light arise,
That heathen gloom
Shall not entomb;
Who follow Him

5.

Shall sure possess the Light of Life,
And to that Light
By grace kept bright
Others shall come.

6.

On them shall dawn a better day
Aye, darkness shall not quench the Light
For morning shall succeed the night,
And sin's dark shadow flee away.

Since writing the above we hear that Tin Shen's husband, a youth of nineteen, has so far been kind to his wife, and shown himself friendly to her foreign friends by coming to the hospital to pay his respects to Mrs. Bell. We may at some future time tell how our hope and confidence have been justified,—our hope that by a consistent life in her new home Tin Shen may win her husband and others, proving in this case, as in similar cases, that "all things work together for good to them that love God."

THE CHURCH MISSIONARY SOCIETY'S PIONEER MISSION IN
KIEN-NING, NORTH-WEST FUHKIEN.

BY DR. JOHN RIGG.

Part II.

In 1892, after two years' work in Kien-ning Fu, a plot of land was purchased, and arrangements were made for erecting a cheap building of wood, and lath, and plaster; the cottage or hovel being really unfit for hospital work. About the same time two ladies of the Church of England Zenana Society went to Ching-ho, a hien (*district*) city of the prefecture, three days' journey beyond Kien-ning Fu. Within a month of their arrival a riot took place, and, after being in imminent danger, the ladies were expelled, the house they had rented was destroyed, and to this day remains a heap of ruins. All efforts at obtaining compensation and re-occupation have failed, and, by the decision of the British Consul, no ladies can return to Ching-ho until a married missionary shall have settled in the city. Since that time the six Zenana ladies have found plenty of work in the villages, and have proved themselves capital itinerant evangelists. In seeking the women, and patiently teaching them, their influence has been by no means confined to their own sex. They have divided into three parties so as to spread the tidings more widely, and several villages which they visited, and some in which they spent the summer, have become places in which precious souls have put their trust in Jesus, the Saviour, and the work of these devoted ladies is a factor of the greatest importance in estimating the prospects of the evangelization of the district. Living, as far as advisable, in Chinese style, and dressed in Chinese clothes, they have shown devotion and zeal of which any Church, even the Roman Catholic, might be proud.

Within a fortnight after the expulsion of the ladies from Ching-ho our enemies in Kien-ning Fu brought their opposition to a head. They engaged men to dig graves in the night and bury sealed jars, presumably containing bones, on our land, which was being prepared for the rearing of pillars and joining of beams, all of which had been got ready by the workmen on their own premises. These graves effectually stopped our building. In interviews with the mandarins every effort to effect a compromise had been made, and it was only after the rejection of every other proposal that we proceeded with the building. When the *literati* had spoiled our land with the graves the magistrate, who was young and recently appointed, offered to provide us with a plot of land in another place in exchange, and to build a hospital upon

it, which he would rent to us in perpetuity. We gladly closed with the offer, but the gentry were not so minded, and on the 11th of May they sent hired ruffians to pull down the hospital and drive out the Christian workers. The Christians, with some half-dozen friends, along with Dr. Rigg, who had come up the previous day for an appointed interview with the mandarin, were scattered; some sought refuge in adjacent houses, some were seized, robbed, and maltreated by the mob, and two narrowly escaped with their lives. During the next fortnight an attack on Nang-wa was threatened, and all the children, and most of the women, were sent by boat to a place of safety. Strong pressure was brought to bear upon the Taotai, a magistrate of high rank in the adjacent city of Yen-ping Fu, and by his intervention, or rather by the good hand of God, the station of Nang-wa was saved.

Through the intervention of the British Consul in Foochow full monetary compensation was given, a fresh plot of land further away from the city was granted, and now, after a wearisome delay and many disappointments, the relation of which would make the story too long, a hospital has been built, and close to it a house for Dr. Rigg. The possibility of a foreign medical missionary living on the premises seemed too remote; but, to our surprise, the native officials themselves made the proposal. As Dr. Rigg is at home on sick furlough the house is at present unoccupied. The gentry will not suffer a clergyman to live in the house, but Mr. Collins pays visits of supervision, and medical and evangelistic work is being carried on by the native students whom Drs. Taylor and Rigg have trained.

Since 1891 a trained worker has been kept at the Kien-ning Leper Settlement; he has been supported by the Leper Society, and continued his good work during most of the time the city was closed against any other form of Christian activity. This has had no mean influence in teaching the people of the love which actuates our attempts to reach them, and so has been a witness for God as well as a blessing to poor suffering men.

In the autumn of 1892 Mr. and Mrs. Phillips were driven from the hien city of Kien-yang, their lives endangered and their house burnt down. After protracted negotiations with the authorities Mr. Phillips has again got a footing in Kien-yang, and, assisted by a native medical evangelist, is doing a valuable work there.

The old station of Ning-wa is being kept on as a hospital and opium refuge, also in charge of a trained native. These five trained natives, one trained by Dr. Taylor and four by Dr. Rigg, are doing a work, without which, probably, no foothold could be retained in this very anti-foreign district. They much need the prayers of those whose hearts are touched with sympathy towards the Christian Church in China thus struggling with the dense mass of heathenism which surrounds it.

The neighbouring prefecture to Kien-ning is that of Yen-ping, with its chief city of Yen-ping Fu, lying twenty-five English miles to the south of Nang-wa. When the Christians were expelled from Kien-ning Fu some of them began dispensary work in Yen-ping Fu, where suitable premises were engaged. With several interruptions this work was carried on for over a year; but when the re-occupation of Kien-ning Fu took place it was found impossible, from lack of workers, to retain Yen-ping Fu. The station has therefore been given up, with the hope that in time we may again occupy it. To our pleasure let it be recorded that three months ago a deputation of some of the shop-keepers and gentry invited us to resume the medical work in that city. We may take courage and thank God for this, as Yen-ping Fu also has a history notorious for hatred of foreigners and persecution of Christians.

The whole work being that of pioneering, and greatly undermanned, there is no record to be made of a flourishing native Church; but there have been a score or more of baptisms, after necessary probation, and many have heard, not with the outward ear only, let us hope, of Jesus, the Saviour of men. Great grace has been upon the native Christians, and they and the English workers have been brought close to each other's hearts in their united efforts for the spread of the Gospel.

The field is large, the workers are weak, and it seems likely that, during the furloughs of Messrs. Phillips and Collins, Dr. Rigg will be in charge of all the work. Are there none who can help?

"An interesting example of the way in which evangelistic and medical departments of the work are mutually helpful is seen in the way in which a new class has been started at a small market town, some eight miles from our most recent centre at T'ang-shien-tsen. Mr. Yang, the native preacher, (who is supported by funds given by members of the Christian Endeavour Society in Canada), visited the town in July last. He had with him a small stock of Gospels and tracts for sale, and offered some to a school-master, but as a Confucian gentleman he treated the "foreign" teaching with scorn. Curiosity, however, as well as contempt, is a characteristic of the literary man in a small out-of-the-way town, and so he who would not purchase could not but listen to the conversation of Mr. Yang and such people as stood around. An arrow of conviction entered the listener's heart when that conversation turned on opium, and he at once acknowledged not only the use of the drug but also a desire to be freed from the habit. He was persuaded to put himself under Dr. Morley's care at the Teh-ngan hospital. During the two weeks' strict confinement to the hospital wards he whiled away the time by reading Mr. Selby's *Life of Christ* and other Christian literature. On his return to his

home he at once persuaded three, and has since got still more, of his companions to follow his example. Within a few weeks the resident minister was passing through the same town, and was at once heartily greeted by the school-master. The change from the sallow thin face to the healthy full features was not more marked than the change from the "Don't want" of a few months earlier to the eager inquiry whether he could purchase a Testament, hymn book and prayer book. A still more recent visit showed Mr. Wu, not only advising opium smokers to go to the hospital but sinners of all classes to come to the Saviour."—"Central China Wesleyan Mission Prayer Union."



Correspondence.

CHRIST HOSPITAL,

Nanking, 15th June, 1895.

To the Editor of

"THE MEDICAL MISSIONARY JOURNAL."

DEAR SIR:

You suggest an article from me, but I can only offer a few notes of some surgical cases:—

(1.) *Amputation of both legs below the knee.*—The case was that of a poor beggar, whom I found lying on his back on the street about the middle of last winter; his two poor legs gangrenous to above the ankle. I took him in, and had him shaved and bathed and clad. We use a shower bath of hot or warm water, which is very convenient for such dirty patients. The legs were removed three or four weeks apart by the lateral flap operation. There was no difficulty, except that in the second amputation the vessels were somewhat friable, and with difficulty held the ligature. The aseptic method was used, and there was union by first intention. For skin cleansing I used soft soap, and smeared the skin with pure creoline, which was washed off, and then the surface washed with bichloride. No irrigation was used before or after the operation. Though the patient was very weak and an opium-smoker he rallied well, and is now stumping about on his knees.

(2.) *Amputation of the breast for rather active schirrhous not ulcerated.*—Woman, 58 years of age. The breast and all the axilla was removed, together with a large portion of the pectoralis major. All of the wound, except the drainage opening, has healed by first intention.

(3.) *Stone in the bladder in a child 6 years of age, Chinese, recovery.* Stone about the size of a pigeon's egg. The suprapubic operation was performed, the T drain and aseptic dressings used. The case is almost healed, and he urinates normally after 16 days.

(4.) *Abscess of the liver.*—Man 35 years of age, somewhat emaciated. Tumor of the right side, which gave more or less of an thrill on percussion. I supposed it was an hydatid cyst, but on aspirating with a hypodermic needle I found pus.

The operation recommended in Gorster's anti-septic surgery was performed. Aseptically (*i.e.*, soap and pure creoline and bichloride washing with sterilized dressing) a cut was made about two and one-half inches long through the abdominal wall below the cartilages, and as there were no adhesions of the liver to the abdominal wall, but the liver moved freely in respiration under the eye, the wound was dressed with iodoform gauze. As there was pain a few hours later, the patient having sat up in bed, the wound was opened and a prolapse of omentum found. This was pushed far in with the finger.

Five days later the wound was opened again, and found to be free of pus. A thrust of a trochar was made into the abscess, followed by a stretching with dressing forceps and two large drains inserted. About sixty ounces of pus was evacuated, and the abscess cavity washed with iodine solution. Five days more have passed, and the man is gaining in health and strength.

Yours sincerely,

W. E. MACKLIN.

Queries and Answers.

[The editor trusts that members will avail themselves to the full of the advantages of this column, and he will endeavour, on his part, to see that every query receives an answer from the quarter, or quarters, most competent to give it.]

Answer to Query No. 1.—This query was referred to Dr. J. B. Neal, of the *Materia Medica* Committee, who writes as follows: "I scarcely feel like undertaking to do any large part of re-writing Dr. P. Smith's work, unless a good strong committee can be formed which will do good thorough work . . . No one on the *Materia Medica* Committee has yet published anything on the native organic drugs that I know of, unless Dr. Douthwaite's papers were such, but I think he was not on the committee. [Dr. Neal is in error; the committee consisted of Drs. Douthwaite, Neal, Wilson, J. C. Thomson and W. H. Park.—Ed.] I am the only one on any committee who has published anything, except Dr. Kerr for the Committee on Nomenclature. I am very sorry that Dr. Smith's book is out of print; it is an excellent book, but I hardly feel like doing much more than is represented in my paper already published toward revising the work." [If any member is willing to co-operate in such an undertaking and will communicate with me I will write to Drs. Neal and others and see whether this work can be taken in hand.—Ed.]

Query No. 2.—A patient at our dispensary had a carbuncle in the dorsal region measuring nine by three inches, complicated with relapsing fever. During the invasion of the fever he had a vesicular eruption over his entire body, face only exempt: over the arms, thighs, above the scapulæ, and in the lumbar region the vesicles were as thick as could stand,

in some places coalescing. There was no itching, slight burning, and it entirely disappeared in about two weeks, drying up, the crusts falling off, leaving normal skin beneath but deeply pigmented. A day after the appearance of the eruption his left leg was paralyzed. I want to ask if anyone has ever seen herpes so profuse as that? There was no tendency to the formation of concentric rings as described in herpes iris. This man's case was an exceedingly interesting one. He had three relapses after the first attack; the whole extending through more than a month's time. He had œdema of the lower extremities for several weeks, which was anæmic, as he had no albuminuria.

This furnishes a good illustration of what some Chinese can pull through. He came to the dispensary every day; some days falling several times from vertigo before he would get there. His food was chiefly boiled dough strings and coarsely ground wheat made into a thin cake. He refused brandy and beef-tea and said iron nauseated him. He lived in a beggars' inn, no other inn being willing to receive him, and slept on the dirt floor, but still he made a good recovery. When he left for his home in Shantung he was well; his paralyzed leg almost recovered.

A. H. P.

Answer.—[The details of this case are far too meagre to make it possible to give a definite opinion as to what this eruption was. A temperature chart at least should have been sent, and the presence or absence of the "spirilla" of relapsing fever stated. One suspects, from the general tenor of the notes, that the term "Relapsing Fever" has been loosely employed for a malarial remittent; if so the presence

or absence of the malarial parasite in the blood should have been noted. For anything the notes say to the contrary the fever might well have been due to the carbuncle only; high fever, of a remittent pyæmic character, is very common in that affection. Assuming that the case was one of relapsing fever the occurrence of herpes, beyond a slight herpes labialis which may appear in any feverish condition, is uncommon, though various forms of erythema and petechiae have been met with in patients suffering from that disease. One may say pretty safely, though, that if the description of the eruption given is correct, whatever it was it was *not* a true herpes of any known variety. This eruption is described as being bilateral "over his entire body, face only exempt." These are not the characteristics of herpes, which is admittedly of neurotic origin; generally unilateral and frequently, in herpes zoster *always*, follows some nerve distribution. Although the manner of disappearance of the eruption is referred to no description of the way in which the vesicles appeared and developed is given, and such a description is a

very important point in diagnosis. No mention is made of treatment, or of the behaviour of the eruption under it. There are, however, four important points mentioned which help to intimate the nature of this affection: (1) the formation of crusts, (2) the pigmentation left by the eruption, (3) the symmetrical character of the eruption, (4) the localised paralysis of the leg. These four taken together certainly suggest syphilis, and to our mind the case was probably one of early syphilis, with a vesicular eczematous eruption; the carbuncle, of course, had nothing to do with the syphilis, but was probably the cause of the fever. If our suggestion is correct the case is a very interesting one, as these vesicular eczematous syphilides are not common. A good description will be found in Dr. Radcliffe Crocker's *Diseases of the Skin*, p. 433.—Ed. *M. M. J.*]

Query No. 3.—Will some brother medical missionary of experience say what, in his opinion, is the cause of the obstinate diarrhœa which often follows on breaking off the opium habit, and what is the best treatment for it?

Notes and Items.

The following is the "confession of faith" put forth by Dr. Ernst Haeckel in his famous discourse on Monism, just recently translated into English:—

"The real maker of the organic world is in all probability an atom of carbon, a tetrahedron made up of four primitive atoms. The human soul is only the sum of these physiological functions, whose elementary organs are constituted by the microscopic ganglion cells of our brain; in this respect it is identical with the soul of the lowest single-celled infusoria.

Consciousness is a mechanical work of the ganglion cells, and as such must be carried back to chemical and physical events in the plasma of these.

From these three articles of faith it follows:—

1. That the belief in an immortal soul inhabiting the body during life and leaving it at death is an exploded superstition.

2. That there is no such thing as personal immortality, for the only soul man possesses being the work performed by the form into which the nerve substance has fashioned, it disappears on decomposition of the nervous mass.

But this is not all. Not only has man no soul, but the universe has no God, and Christianity is a bundle of irrational dogmas based upon an impossible mythology. "All such mystical teachings are irrational," and "we can at once set aside all mythological stories, all miracles and so-called revelations." The notion of a personal God has also "been rendered quite untenable by the recent advances of monistic science," and this "antiquated conception" is destined "before the present century is ended, to

drop out of currency throughout the entire domain of truly scientific philosophy." The God of Christendom, it seems, is a "gaseous vertebrate," whereas the only God whom the Monist recognises is "the infinite sum of all atomic forces and all other vibrations." The only Trinity which the coming twentieth century will worship—"the three august divine ones, to which mankind will build its altars, are the True, the Beautiful and the Good."

All of which is sad enough reading for those who still cling to what Dr. Haeckel dismisses as "the beautiful dream of God's goodness and wisdom in nature" which has disappeared "among educated people who think." Of course, such ideas have been held by many men in many ages. What is significant about Dr. Haeckel's utterance is the complacent cocksureness with which he proclaims the effacement of the Christian faith. This is the apogee of the spirit of scientific dogmatism, worthy of note as such, for already its sun is beginning to set.—*Review of Reviews.*

DR. MILLER ON THE PROBLEM OF MISSIONS.

The aim of missions to the heathen was once supposed to be very obvious, and that being so there could be little question about missionary methods. The missionary believed that the heathen needed salvation, and that the Gospel he carried, and that alone, was the power of God to save. Such a belief, no doubt, is most natural in those who identify the Gospel with the particular form in which they themselves hold it. It may mark a certain kind of progress when one is

capable of distinguishing between form and substance, and can expound various conceptions of Christianity; but it is not progress which qualifies him for missionary work. To evangelize is one thing; to philosophize is another.

The missionary, then, as most people have supposed, went out with his Gospel to confront the sin and misery, the ruin and failure of the world. No one ever imagined that he would be met by its virtues and its success. "Without the message I bring," he was supposed to say to his hearers, "you are lost men;" no fancy ever contemplated him pleading for an audience on the ground that he and his hearers had much to learn from each other. His business was to win men over alike from their religions and their sins; to persuade them to commit themselves absolutely, renouncing everything else, to JESUS CHRIST; to baptize them, in His name, into the universal Church, and to teach them to observe all things whatsoever He had commanded. This plan is radical, simple and intelligible; and if it assumes that "the past part" of the heathens' experience has only a negative relation to the Gospel—constitutes his need for it, but not a contribution to it—there is a great deal in the New Testament which looks the same way.

This simple plan, however, has for some time been subjected to criticism. The science of Comparative Religion had naturally something to say to its assumptions. This new science, of course, studies religions and estimates them, according to their ideals; it seeks for the positive spiritual impulse at the heart of each, and is greatly concerned to prove that they are vitally related, and from the highest to the lowest are branches upon one tree. It cannot allow that in the most degraded forms of religion—not to mention the highly intellectual and ethical forms assumed by Brahmanism and Buddhism—there is no positive relation to the Christian

faith. Even in carrying the Gospel to Brahmins, to Buddhists, or to Moslems, we must admit the worth of what they have. CHRIST does not wage a war of extermination against the other great founders of religions; at best, He carries their work to a further stage of perfection. This tone is probably painful to the ears of many sincere Christians, but we hear it on every hand. What is more, missionaries hear it too. The great religious societies of the East boldly compare the ideals of their ancestral faiths with that of Christianity, and claim to maintain their independence in its presence. Every nation, it is said, lives by its religion—so far, Mr. KIDD's ideas are familiar in Hindostan. To change its religion is to dissolve itself. How, then, is the Gospel to be presented, say to Hindu society? Granted that it has something to give, in what way is it to be offered?

Questions like these are now being freely discussed among the missionaries themselves, and no one can fail to see their importance. What may be called the newer mode of answering them is worthily presented by Dr. MILLER, of Madras, in a recent address on "The Place of Hinduism in the Story of the World." The address was delivered to the students of the Christian College, and embodies the convictions in the strength of which Dr. MILLER has spent his life in India. He does not expect universal acceptance for them: on the contrary, he is sure that a storm will burst, and he knows beforehand all the fierce and unkind things that will be said of him by Christians, Hindus and irreligious men. But, he writes, "it is enough for me to know that they are true. It is enough to know that in the end they will prevail." What, we ask eagerly, are the ideas or the aim or the methods of Christian work in India, which are destined to provoke such general resentment, and in spite of it to triumph at last?

Dr. MILLER's address is somewhat involved, both in thought and expression; but we do not think the scope of it is misrepresented if we say that he would have CHRIST offered, or rather exhibited, to Hindu society, as "He who has united ideals." He would preach the Gospel, so to speak, on the basis of a certain interpretation—we might almost say a certain philosophy—of history. The various elements in the moral resources of humanity have, as he points out, been elaborated apart from each other, and only united under CHRIST. The Greek ideal of knowledge, the Roman ideal of law, the Israelitish ideal of a divine ruler of the world, the Teutonic ideal of freedom or individuality, are all united, more or less, in Christian nations under the power of the perfect ideal supplied in CHRIST. One may utterly distrust such formulæ, and deny that they do anything but puff up the ignorant with the conceit of knowledge; but let that pass. We, too, believe that the desirable things of all the nations shall be brought into the city of God. We believe that the Hindus, were they Christians, would add enormously to the riches of the Church. We believe that whatever intellectual or moral power Hinduism has generated or accumulated can be absorbed by Christianity. We will not contest Dr. MILLER's assertion that the Western mind needs to be impregnated with the great Hindu conceptions of the *omnipenetrativeness* of God, and the *unitedness* and *solidarity* of men, though we do not admit that there is no plain English for these imposing words. But the real question remains—the question on which Dr. MILLER avowedly differs from many of his colleagues, as well as from many Christians at home. Through what process is the Christian ideal to assert its superiority over the Hindu mind, and lead it, with all its wealth, captive to humanity? How is it to bring the Hindu out of his isolation into the great spiritual life of the world?

To these questions Dr. MILLER cannot be said to give a clear answer. He exhibits CHRIST as the embodiment of an ideal into which all that is good in Hinduism can be absorbed, and he leaves the individual who feels its charm to go and work it out as God guides him, in the circumstances in which God has placed him. It is not so much the Christian ideal which absorbs the Hindu one, as the reverse. The Church, in the sense of the Epistles, disappears. There is no new Christian society, constituted by men who have been baptized into the death and resurrection of JESUS, open alike to Hindu and to Englishman, and visibly distinct from the natural organization of the race. Perhaps Dr. MILLER would say the Church in his programme is sublimated into the kingdom; to others it will seem to be lost in the world. As for the existing Churches and their missionary methods, in India at least, he has a very decided opinion. They do not represent the highest Christian ideal either in their conception of the Gospel, in their evangelistic intention, or in the method and spirit of their work. They represent among Christian nations the survival of that aggressive patriotism which was once the characteristic of the republics of Greece and Rome. This is the only thing in Dr. MILLER's paper which is at once unjust and unkind. "You know the energy," he says to his pupils, "which characterises the Churches of the West and the missionary societies and missionaries that represent them. If we had moral weights and measures, I do not know whether we should find ninety per cent. or only eighty, but I know we should find the most of that energy to arise not directly from the power of CHRIST's life or precepts, not from the working of CHRIST's ideal, but from the working of the old ideal of sacrificing self to secure the success of one's own community, to secure the triumph of the Christian scheme of life over other schemes which are regarded as its adversaries." And again, "We have other institutions (referring to

the missions of the various Churches) which, working rather on the Greek and Roman ideal than on CHRIST'S, make it their one overmastering aim to bring men over from other schemes of life, and to place them within the Christian fold." Dr. MILLER might easily anticipate that statements like these would be resented, though we hope not in "fierce" and "unkind" words. But his formal philosophizing must surely have put out his eyes when he ventured to describe the modern missionary movement, which sprung directly from the evangelical revival of last century, as the recrudescence, within the various sects of Protestantism, of the patriotism of classical times. If it is a case of atavism, the reversion is not to PERICLES and CÆSAR, but to PETER and PAUL. The statement would be a slander if it were not grotesque; if it were true, then if not ninety per cent. or eighty, certainly most of the friends of missions would fall under the woe pronounced by JESUS on those who compassed sea and land to make one proselyte. We do not believe they do.

"Is He the GOD of the Jews only?" says the greatest of missionaries. No, of the Gentiles also; of the Hindus too. There is no exclusiveness with Him, and we may be sure He will take Hinduism for all it is worth. But the truth must be held fast, if Christianity is to live, that it is indispensable to all men and nations, in a sense in which they are not indispensable to it. It is not only the power which unifies ideals, but in the first instance the power which saves souls. And CHRIST is not merely the highest ideal, the central consciousness of the race; He is the only Saviour. The Christian religion has a solitary importance, because it is the religion of redemption; it is not to be absorbed into the general stream of human progress, it is rather to absorb all things into itself. It is a mode of selfishness in ALEXANDER or CÆSAR if he wishes to subdue the world, but not in CHRIST, and not in the Christian who calls Him LORD: for He is the

head of every man, the First and the Last. It is difficult in reading Dr. MILLER'S plea to avoid the impression that he is preaching wisdom to those who are not perfect, and that the foundation is not likely to be laid in this way. There is something imposing in its generalities, and in the confidence with which the writer, after long experience, ventures to stand above all possible criticism; but the temper is not that in which evangelistic work has ever been done, and the mind of the Church will be exercised over it.

JAMES DENNEY.

—From the *British Weekly*.

HEREDITY.

Why bowest thou, O soul of mine,
Crushed by ancestral sin?
Thou hast a noble heritage
That bids the victory win.

The tainted past may bring forth flowers,
As blossomed Aaron's rod,
No legacy of sin annuls
Heridity from God.

LYDIA A. CORNLEY in "Arena."

OPIUM HABIT.

"In 1893 there was a British Royal Opium Commission appointed to consider the evils of opium eating and the financial difficulties that would be involved should the traffic be abolished by law. The commission has reported that it not only found no evil from the "temperate use of opium in India" but that in many instances its use is "even beneficial." The finding of this Royal Commission reminds us of the findings of a Scotch beadle on the use of alcohol. The elders of a Church had reason to suspect that their good old minister was occasionally taking a little too much *uisge beatha*. With the characteristic caution of the race they thought it well to have their suspicions verified by the testimony of the Church beadle.

They consequently inquired of *Andrew* if he had ever seen the good doctor the worse for liquor. *Andrew* replied that he had never seen the doctor the worse for liquor, but he had often seen him "mickle the better for it."
—*Extracted.*

From a private correspondent we hear that Dr. and Mrs. MacFarlane, of the L. M. S., have once more lost one of their little ones; this time at Chefoo. We are sure that our friends will have our sympathy and prayers in this affliction which has come to them. The loss of a little child in this far off land touches us all deeply. Many of us long for the prattle of some little voice now hushed for ever on earth. The circumstances were especially sad. The little one was in perfect health, apparently, the day he was taken ill, and in a few hours he was dead. For some time he with his mother, and the other little one, had been at Chefoo. Dr. MacFarlane was on his way down to take them home. A fog delayed his steamer, and he was actually lying anchored at the bluff at the time his child was dying. He arrived six hours too late!

Dr. J. D. Thomson, of Hankow, in an interesting private note to us tells of having performed Halsted's operation for removal of the breast (reproduced *M. M. J.*, Vol. IX., No. 1, p. 42.) He writes: "The patient was an old woman 63 years of age and very thin. The breasts were very low, and she had a large ulcerating cancer of the left breast with a mass of hard glands in the axilla, and under the pectoral muscles as far as the clavicle. The woman was so thin that these could easily be palpated. The breast hanging the incision was necessarily very long, and the triangular flap of skin long too. Owing to the extensive glandular

infiltration I considered it wise to remove the pectoral minor as well as major, after having divided it perpendicular to its fibres to get at the tissue beneath. I left only the clavicular portion of the pect. major, after having divided it hard up to the clavicle and cleaned out the tissue beneath it. I dissected the tissues (including the affected glands) clean out, laying perfectly bare the axillary vein in its whole length and exposing also the artery and nerves, finishing up, as described in Halsted's paper, with the lateral and posterior walls of the axilla."

The patient stood the operation well, and recovery was rapid. "Owing to the low state of vitality there is a little necrosis of the free angle of the skin flap, but that will make no difference to the free movement of the arm as the fornix of the axilla is well lined and to spare." Dr. Thomson says he found no special difficulty in the operation, and would undertake it again should occasion arise, as "I am convinced it gives the patient the best chance. In this case a less radical operation would, I think, have been *certainly* unavailing."

Dr. Thomson also refers to two stone cases. The first removed by lateral lithotomy weighed 2 ozs. 3 drs. ($13\frac{1}{2}$ grains). It was a flat ovoid $1\frac{1}{4}$ inches thick, $1\frac{3}{4}$ inches broad and $2\frac{1}{4}$ inches long—a fairly large stone to remove by the lateral operation. The patient did well, passing water $\frac{1}{2}$ by wound and $\frac{1}{2}$ by urethra on the 6th day, and the whole of it per urethram on the 10th day. Left hospital within three weeks well and with wound firmly healed.

The second stone was removed by the suprapubic operation, as rectal and other examination left little doubt that the prostate was well thinned and possibly ulcerated. On removal it was found to be a "very curiously shaped stone with hour glass-contraction, and having the part that was imbedded in the prostate eroded like

the broken surface of living bone. The portion behind the constriction was smooth and shaped like the trigone of the bladder—somewhat heart-shaped—total weight 670 grains. The bladder was irregularly shaped—sacculated—and the prostate scooped out and ulcerated.” This patient did well for a few days, and then died on the eighth day after operation with symptoms of uraemia.

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“MEDICAL MISSIONS IN INDIA.”

We welcome heartily another medical missionary journal. Dr. HUSBAND, of Ajmere, writes as follows:—“DEAR DOCTOR,—At a meeting of twenty-four medical missionaries held in the hall of the Free Church, Calcutta, on the afternoon of Thursday, the 27th December, 1894, it was agreed, after full consideration, to start a quarterly publication, to be called *Medical Missions in India*, with the object of promoting the interests of our work in this country, and providing a means of regular communication between all those engaged therein. It was further agreed that the price of the journal should be

four annas per quarter, exclusive of postage. We, the undersigned, were appointed a committee to carry out the necessary arrangements, and we earnestly appeal to all those engaged in medical missionary work in India to give us their co-operation and support, both by subscribing to the paper and contributing material. An effort will be made to have the first issue ready in April. The undersigned will be glad to give any further information that may be desired, and also to receive the names and addresses of any medical missionaries who may not have received this circular. Trusting to receive not only your approval of this effort but also your prayerful help in making it a means of helping our common work, we are, yours very sincerely, J. HUSBAND, F.R.C.S.E., United Presbyterian Mission, Ajmere; JAMES M. MACPHAIL, M.B., C.M., F.C. of Scotland Mission, Chakai, Bengal; EDITH BROWN, M.D., Ludhiana, Punjab; G. L. NICHOLAS, M.D., London Mission, Berhampur.

P.S.—All orders or contributions for the journal to be sent to Dr. HUSBAND, Ajmere.—*Medical Missions at Home and Abroad.*

Medical and Surgical Progress.

CLINICAL LECTURE ON COCAINE IN SURGERY.

Delivered at the Pitié Hospital.

By Dr. P. Reclus,

Professor Agrège at the Medical Faculty of Paris, Surgeon to the Paris Hospitals.

I have been asked, by several medical men who attend my hospital practice, for precise indications with regard to the method of cocaine injection I employ in my operations. In compliance with their desire I have selected this subject for my first lecture in this hospital, where I spent a long time as house-surgeon to such men of eminence as Broca, Trelat, Labbé and Verneuil.

The subject, however, is much too extensive to be fully dealt with within the limits of a clinical lecture. I shall, therefore, take for granted what is still denied by some of my colleagues, viz., that cocaine is a local anæsthetic; that with its assistance grave and lengthy operations can be performed without the slightest pain to the patient; that it is absolutely harmless when properly applied and that the accidents which are attributed to its use are simply the result of ignorance or recklessness. I intend to discuss the last two points more fully at some future date, when I shall avail myself of the results obtained in 1,937 cases of all kinds on which I have operated under cocaine during the last eight years. To-day I shall confine myself to the description of the method of procedure which should be employed to avoid danger and to produce a sufficient degree of anæsthesia for ordinary surgical operations.

The strength of the solution is perhaps the point on which the safety of the operation most depends. Cocaine is generally used in 5, 10 and even 20 % solutions. Too

strong a protest cannot be raised against such an abuse. From a careful examination of the accidents which have been recorded from the administration of cocaine, I am satisfied that the strength of the solution plays at least as important a part as the dose injected. I would much rather inject twenty centigrammes (three grains) of cocaine in the form of a 1 % solution than ten centigrammes (one and a half grain) in a 20 % solution. I am not prepared to give a physiological explanation of this variation produced in the effect of cocaine by dilution, but I assert that such a difference does exist, and I conclude, therefore, that cocaine should only be injected in 1 and 2 % solutions; the 2 % solution is to be used in minor surgical operations and the injection of two or three hypodermic syringefuls will then suffice to produce the desired effect; the 1 % solution is to be reserved for operations requiring more elaborate dissection when four, six, ten or fifteen syringefuls are required to render the part sufficiently anæsthetic.

A syringeful of the 2 % solution contains two centigrammes (one-third grain) of cocaine in one gramme (fifteen minims) of fluid, while the same quantity of the 1 % solution represents one centigramme (one-sixth grain) of alkaloid. The dose of cocaine injected can, therefore, be accurately measured. It should on no occasion reach twenty centigrammes (three grains), for twenty-two centigrammes (three and two-thirds grains) have caused death. The strength of the solution used in this particular instance was not given, but I fancy it must have been a concentrated one. However, I do not mean to argue the point, I simply take the fact as I find it and I

maintain that in order to avoid all danger the total quantity of 1 % solution injected should on no account be such as to represent twenty centigrammes of cocaine. This is of little consequence, however, for it is very seldom that it is found necessary to inject more than fifteen centigrammes (two and a half grains) of cocaine. For my own part I have never injected more than seventeen centigrammes (a little under three grains), a dose which is perfectly consistent with safety, even in such important operations as amputation of the fore-arm, wiring of the patella or laparotomy. Therefore, to recapitulate, 1 % and 2 % solutions should alone be used, and the dose of cocaine injected should not be larger than from fifteen to twenty centigrammes (two and a half to three grains). The degree of anæsthesia produced in this way is quite sufficient even for severe operations.

Before describing the injection itself I may be allowed to make a few preliminary remarks. The operation should always be performed with the patient in the recumbent posture. In this way syncope, which is of such frequent occurrence in dental practice, is almost certainly avoided. Throughout my long experience I have noticed signs of syncope only in patients who were allowed to sit up during an operation for labial cysts, whens of the scalp and face, rodent ulcer of the cheeks or brow, extraction of wisdom teeth. Quite recently I performed an operation on a Greek from Smyrna, who was allowed to sit up during the operation, but my assistants were told to prepare for the possible occurrence of syncope. Towards the end of the operation the patient gave signs of faintness, which disappeared as soon as he was placed in the recumbent posture. Not once have I observed an accident of this kind in patients who were placed from the first in the horizontal position, independently of the strength of the solution used and of the dose injected. The patient, however, is usually given some

spirits or coffee, and although the presence or absence of food in the stomach may be disregarded, yet I consider that a little food before the operation increases the chances of success.

As regards the injection itself, let us take as an illustration a simple case, for example, the removal of a subcutaneous tumour, lipoma or sebaceous cyst. Having decided upon the exact site and length of the incision to be made, I plunge the needle at the point where I mean to enter the knife. If the needle has penetrated to the subcutaneous cellular tissue it is withdrawn a little until the point is again in the true skin. A few drops of the solution are then injected, the injection being followed by a slight swelling of the skin, and from that time the pain should completely disappear. If the patient complains of pain it is the surgeon's fault. The needle must be introduced slowly and, as the cocaine is gradually injected as the needle travels in the thickness of the corium, all sensibility has already disappeared from the tissues when the needle passes through them. The needle must not pass deeper than the true skin, and in this the surgeon is guided by the swelling produced by the fluid and by the resistance encountered by the point of the needle. The disappearance of this feeling of resistance indicates that the needle has passed into the loose subcutaneous tissue. It should then be withdrawn until the resistance is again felt. The true skin is so thin in the eyelids and prepuce that it is difficult to keep the point of the needle therein, but this is of little consequence in operations on these parts, for the tissues are rapidly permeated by the cocaine solution.

If the needle is too short to be carried at once along the whole line of the future incision it is taken out, the syringe is refilled if necessary, and the needle introduced again at a point a little above that which it had previously reached and where the skin is now completely anæsthetised. I may be excused if I insist on the necessity of inject-

ing the fluid gradually and, as far as possible, without removing the needle instead of by a series of punctures. In this way the patient complains of no pain except when the needle is first introduced, the cocaine solution is equally distributed throughout the tissues and the degree of anæsthesia is the same all along the line of injection. Lastly, and this is important, the risk of injecting a large quantity of cocaine into a vein is avoided, for since the solution is continuously injected as the needle travels in the substance of the corium, even if a vein is punctured, the needle soon passes through it and the dose of cocaine which finds its way directly into the circulation is then too small to give rise to any accident. Such a danger is not, it is true, to be apprehended in the case of the skin which contains no large blood vessels, but the injection should be performed with the greatest care in such parts as the lips, tongue, cervix uteri, anus and in certain forms of nævi. Hence I am in the habit in these cases of first introducing the needle as far as it will go and of injecting the fluid as the needle is withdrawn: the piston is driven home as the needle is drawn out of the part.

When the injection is completed, I allow three or four minutes to elapse if the 2% solution is used and five or six if the 1% solution is the one employed. During that time the part is shaved and bathed first in hot water, then in ether, alcohol and corrosive lotion. The next step is the incision. The greatest care is required in carrying the knife exactly along the tract of the needle and to keep in the centre of the anæsthetised area, which is often not more than one centimetre (two-fifths inch) in width. The parts are sometimes displaced by the hands of assistants, and I have seen more than one case in which the patient complained of pain because the surgeon had entered his knife on one or the other side of the part anæsthetised. Hence all manœuvres likely to alter the relations of the parts are to be avoided, and, if the operator is not sure of re-

cognising the line of the injection by the slight whitish or pinkish ridge on the skin and the points of puncture, the incision should first be marked on the part with tincture of iodine. When these precautions are taken, the operation is absolutely painless: the patient feels the contact of the instrument but no pain. In fact it is really not anæsthesia but analgesia.

This, however, is but a simple operation, where the knife has only to go through the skin. But we may be called upon to perform operations of a more complicated character under local anæsthesia: for example, the operation for the radical cure of inguinal hernia or of hydrocele, castration, amputation of a phalanx or of one of the metatarsal bones, dilatation of the anus and the removal of hæmorrhoids, laparotomy for appendicitis, hydatid of the liver or for ovarian cyst. I could mention a good many more operations which may be performed by this method, but the enumeration would serve no useful purpose. Every surgeon has his own methods of operation which he prefers to all others, and he will soon learn how to use cocaine to the best advantage.

For the radical cure of an inguinal hernia of medium size, a tract of skin from six to eight centimetres (between two and three inches) in length is rendered anæsthetic, the injection of three or four syringefuls of the 1% solution being sufficient for that purpose. An incision is made down to the aponeurosis of the external oblique. The external abdominal ring and the hernial sac having been exposed, the hypodermic needle is introduced under the aponeurosis of the external oblique and into the adjacent muscles, which are in their turn rendered anæsthetic; they are then divided as far as the internal ring. The sac is carefully dissected from the surrounding parts with the scissors to avoid injuring the adherent spermatic vessels and vas deferens. If adhesions are found, division of which gives rise to pain, a little more cocaine is injected and pain at once disappears. When the sac has

been separated as high up as possible, one or two syringefuls of cocaine solution are injected into it before it is opened, in order to produce anæsthesia of the peritoneum and of the contents of the sac. The latter is then opened and the hernia reduced; the reduction is not attended with colicky pains as it would if no anæsthetic were used. The sac is tied very high up and cut off. The muscles and the aponeurosis of the external oblique are successively sutured in such a way as to obliterate the inguinal canal and to restore the strength of that part of the abdominal wall. As a last step in the operation the external wound is closed.

The dose of cocaine injected depends on the length of the incision, the degree of obesity of the patient, the size of the sac and the amount of adhesion to adjacent parts, to the intestine and omentum. In a recent case of this kind I obtained the desired effect with only three injections of the 1 % solution, but in other cases I have had to inject as many as fifteen centigrammes (two and half grains). As a general rule, from seven to nine centigrammes (about one to one and a half grains) are amply sufficient to produce complete anæsthesia.

The parts remain anæsthetic throughout the operation, and the stitching of the wound seldom gives rise to any pain, although it may not be done until half an hour after the first injection. In one case where I had to open several diverticula before I could reduce the hernia the operation lasted an hour, and yet the patient complained of no pain when the external wound was closed, although he could feel the needle pass through the tissues. I have never had occasion to repeat the application of cocaine, even in the most prolonged operations.

The operation for the radical cure of hydrocele has many points in common with that just described. A band of skin over the anterior aspect of the distended scrotum is rendered anæsthetic with three injections of cocaine. The coverings of the testicle are divided until the tunica vaginalis is exposed.

This is carefully separated from the surrounding parts as far back as the epididymis. The fluid is drawn off, and one or two syringefuls of cocaine solution are injected into the cavity and shaken about in it. When the serous membrane is completely anæsthetised it is cut away, enough being left in position to form a new tunica vaginalis. For this purpose, after resection of a portion of the sac, the edges of the cut are brought together by means of a few silk sutures. Some surgeons prefer Bergmann's method, which consists in total excision of the tunica vaginalis inclusive of the digital fossa which can be easily dissected off. All that now remains to be done is to replace the testicle in the scrotum and, after ligaturing the few vessels which have been divided, to close the wound in the scrotum. Cysts of the epididymis are dealt with in the same way.

The operation for excision of the testicle is just as simple. In this case the injections are made along a looped line forming a figure somewhat like a tennis-racket. It begins at the external abdominal ring, runs circularly round the part of the scrotum to be opened and then back again to the external ring. As the skin of the scrotum is very mobile it is of the greatest importance to follow the tract of the needle with the greatest care so as not to carry the knife outside the anæsthetic area. The testicle is carefully isolated until it hangs freely from the end of the cord. A syringeful of 1 % solution is injected into the latter at the point where it emerges from the inguinal canal. It is then tied at this level or a little higher up and divided. The presence of the large spermatic plexus of veins renders the injection of cocaine into the cord a rather delicate operation, owing to the danger of injecting the alkaloid directly into the blood stream. To avoid this I am in the habit of spreading the cord on my finger and of introducing the needle at once as far as it will go; the fluid is then injected as the needle is being withdrawn. After removal of the

gland the cut vessels are tied and the scrotal wound is closed.

Dilatation of the anus is a more complex operation, for here we have to anæsthetise the mucous membrane and the sphincter. A plug of cotton-wool soaked in 2 % cocaine solution is introduced into the rectum. Six injections are made round the anal orifice into the substance of the sphincter itself. The injections are made in different places; this operation is, therefore, more painful than those already described in which the patient only feels the first puncture. As we are here dealing with a very vascular region the whole of the needle is, in this case also, introduced at once and the fluid injected as the needle is being withdrawn. A syringe-ful is injected each time. The 1 % solution should be used, in which case a total of six centigrammes (one grain) of cocaine is injected into the sphincter. This is important, for in this case the whole of the cocaine is absorbed, whereas in the operations I have already described part of it escapes with the blood. It is essential, therefore, to exercise the greatest care in the use of cocaine in such a case. For my part I have never exceeded the dose of six centigrammes, which is quite sufficient for our purpose, and after three or four minutes I was enabled to introduce Trélat's speculum and to dilate the sphincter without causing any pain to the patient. I have now successfully performed this operation more than forty times under cocaine anæsthesia.

When hæmorrhoids are present the operation is not rendered more complicated by their removal. The mass is seized with forceps and half a syringe-ful of the 1 % solution is injected at its base with the most infinite precautions owing to the great vascularity of the part. When anæsthesia has been produced the pile is cut away with the scissors and the mucous membrane brought down and stitched to the skin at the margin of the anus. There is complete union in a few days. I feel justified in recommending this operation which I have myself perform-

ed twenty-seven times with complete success, and I have never met with a relapse in these cases as I have after simple dilatation.

Amputations of the fingers and toes, of metacarpal and metatarsal bones, operations for hammer-toes and for alterations in the first metatarso-phalangeal joint can very well be performed under cocaine. But after rendering the skin anæsthetic along the line of the future incision some of the solution should be injected under the periosteum at the point where the bone is to be sawn through. The amputation is then perfectly painless. We have gone still further, for we have succeeded in amputating the forearm by this method without any pain to the patient, and the total dose of cocaine injected in the form of the 1 % solution did not exceed fifteen centigrammes (two and a half grains). The fluid was injected into the skin along the lines of incision, into the muscles of the front and into those of the back of the fore-arm, and also into the three main nerves of the part, which had previously been exposed. Lastly, cocaine was injected under the periosteum of the radius and ulna. It was only under very special circumstances that we decided to make use of cocaine in such a serious operation and one which, in my opinion, should not, as a rule, be performed except under chloroform. In this case the patient was exhausted by prolonged and extensive suppuration, and he was eighty-three years of age; I have long ago been able to convince myself of the fact that cocaine is better, or less badly, borne than chloroform by cachectic and debilitated patients.

Cocaine and chloroform have each their own indications. I consider that cocaine is not to be used in extensive operations and those the limits of which are not very well-defined from the outset. Whereas, on the one hand, it seems to me to be indicated in excision of subcutaneous tumours, the opening of abscesses, ingrowing nails, amputations and excision of the phalanges or of the metacarpal bones, in kelotomy, the

operation for the radical cure of hernia and hydrocele, in dilatation of the anus, circumcision and castration, in abscesses and hydatid cysts of the liver and in the formation of an artificial anus: I believe, on the other hand, that chloroform should be preferred in the surgery of the uterus and abdomen generally. If on two occasions I have had recourse to cocaine in an operation for ovarian cysts, it is because I consider that it is desirable that we should obtain experimental evidence as to the limits within which local anæsthesia can be depended upon. Cases of this kind may, indeed, arise in which, owing to the existence of some contra-indication to the use of chloroform, cocaine becomes the preferable anæsthetic, but they should always be regarded as exceptional.

As already said I made use of cocaine in two cases of ovarian cyst. In the first of these the tumour only extended to about a finger's breadth above the umbilicus, and it did not seem to me to be adherent. The skin, the abdominal aponeurosis and the peritoneum were successively rendered anæsthetic. The fluid contained in the cavity of the cyst was drawn off, and so painless was the operation that the patient was unaware that it had commenced. Unfortunately the tumour had formed such extensive adhesions with the peritoneum and intestines that I was compelled to complete the operation under chloroform. A few drops of chloroform were sufficient to produce general anæsthesia, and I was able to proceed with the operation without further interruption. Ten days ago I met with a similar case. I found no difficulty in opening the abdomen from the umbilicus to the symphysis pubis and in removing the contents of a dermoid cyst. I hoped to be as successful in drawing the tumour out of the abdominal cavity and in rendering the pedicle anæsthetic, but I soon discovered the existence of a sarcoma which was adherent to the cyst, to the intestines and meso-colon. The operation was thereby

rendered much more difficult. Chloroform was administered, and in this case, as in the first and likewise in three others which I intend to publish, general anæsthesia was rapidly produced with only a few drops of chloroform. I do not mean to say that we should look upon this as an indication that chloroform is to be given in combination with cocaine but, in my experience at any rate, there seems to be no antagonism between these two substances.

I could, and ought perhaps, to describe a few more cases and to give a detailed account of the method of procedure adopted in the numerous operations in which I have made use of cocaine injections. But I believe I have said enough on this subject to justify my concluding this lecture by this general statement: cocaine is a most valuable agent under certain conditions; it enables us to perform delicate and important operations almost without any assistance, and its use is not attended with the same risk, trouble and loss of time which is so characteristic of chloroform.

THE THERAPEUTICAL EFFECTS OF BETA-NAPHTHOL BISMUTH.

By *Hugo Engel, A.M., M.D.*

Fellow of the American Academy of Medicine, Late Professor of Nervous Diseases and Clinical Medicine in Philadelphia, etc.

Should each decade of the nineteenth century be given a name to represent the progress made and the activity displayed during it in the various branches of medicine, we might bestow upon the period of the last ten years the appellation of the epoch of the discovery of new remedies. It, indeed, is not easy to keep step with the rapid march of advancement in therapeutics. And it is not only the great number of new drugs—though so great as to cause our admiration of the wonderful fertility of the human brain in the invention alone of names for them—but it is also

their valuable character, the definite results following their employment, that has made this decade so remarkable. That some chaff is mixed up with the wheat scarcely deserves mention; wherever truth and real worth achieve victories, humbug is bound to claim its portion; but when it appropriates to itself the lion's share, it can do so only by proving the correctness of the adage: *Mundus vult decipi, ergo decipitur*. Fortunately, since a higher standard of medical education has extended the grasp of the intellect, that proverb to-day finds but little application to physicians, and the harvest of proprietary remedies, whose sole virtue (?) rests in the skill with which the owners have succeeded in giving a new name to well-known drugs, has been but limited.

Among the many valuable achievements of the modern manufacturing chemist one class has not yet attracted in our country the attention it deserves, viz., the combinations of phenol, cresol and naphthol with bismuth. Of these I have thoroughly tested but one—beta-naphthol bismuth—and so reliable have I found this drug, and so superior in intestinal complaints to all the various bismuth salts previously known, that I determined to publish my observations for the benefit of the medical profession as well as for that of suffering humanity.

The internal application of the phenols has thus far been but a very limited one. In their free state they are exceedingly poisonous, their caustic action is deleterious to the mucous membranes of the alimentary canal, and they possess, besides, a very disagreeable odor and are repugnant to the taste. In their combination with bismuth they seem mutually to neutralize these obnoxious properties, and when thus introduced into the human system they again form the various phenols with all their therapeutical effects, the oxide of bismuth also being liberated and fixing the toxic albumins in the intestines.

From the reports of experiments made in Professor Nencki's Laboratory at the St. Petersburg Imperial Institute for Experimental Medicine,* we learn that beta-naphthol bismuth, when introduced into the stomach, is decomposed into naphthol and bismuth to some extent; some passes on into the intestines, where the conditions are also favourable to its complete decomposition from the acid reaction of its contents and the presence of the pancreatic juice. Naphthol is but partially eliminated with the urine; the residue passes through the whole alimentary canal, and is finally excreted by the fæces. Bismuth, on the other hand, is totally excreted with the fæces as sulphide (in man; in the dog not, because of the relatively much greater amount of muriatic acid in that quadruped, causing the formation of some soluble chloride, but most of it undergoing the same changes as in man). In no single case were any toxic symptoms observed, though administered in daily doses of seventy-five grains (one hundred and fifty grains to dogs).

Another observation showed that all the combinations of the phenols with bismuth undoubtedly arrested the development of bacteria—an important fact which, though explained by the separation occurring in the intestinal tract, yet by itself explains the remarkable effect of these remedies in certain bowel complaints.

Professor Hueppe† also found beta-naphthol bismuth a most powerful intestinal antiseptic, and recommends it as a specific in Asiatic cholera. He treated a number of cases with it in one of the Hamburg hospitals. Von Nencki‡ noticed that the drug was well borne by patients even when continued a long while. Other Russian physicians§ administered it in Baku in

* Reports by Dr. M. F. A. Jasenski, *Arch. des Sci. Biol.*, Vol. ii, No. 2.

† *Berl. Klin. Woch.*, 1893, No. 7.

‡ *Wratsch*, 1893, No. 1.

§ Schublenke, Blackstein, and Petkewitsch, *Wratsch*, 1892, Nos. 41 and 51.

daily doses of fifteen to thirty grains in choleraic diarrhoea and allied diseases, and, while recovery occurred in almost all cases, injurious effects were not noticed in any.

Wilcox* read last December a paper on bismuth in general, in which he speaks highly of the combinations in question, and finds the beta-naphthol bismuth especially indicated in all fermentative bowel complaints.

By Jasenski† it has been used with success in chronic intestinal catarrh and in cancer of the stomach. The eructations and the vomiting were completely relieved in the latter disease.

I will now report a few cases from my own practice to illustrate the remarkable effect of the preparation:—

A. G., aged twenty years, had been a robust, healthy young man up to July, 1894, when, while at the seashore, he was seized with severe abdominal pain in the left hypochondriac region. The pain returned from one and a half to two hours after every meal, and was at first felt only for a few minutes. Gradually, however, this time extended; the pain lasted an hour and more, until it finally never ceased completely. Simultaneously with this exacerbation in the pain the general health deteriorated; the appetite vanished, severe thirst took its place, and A. G. lost decidedly in weight. This train of symptoms went on unchecked until, early in October, vomiting and diarrhoea made their appearance, from which the patient had suffered but a few days when high fever set in, forcing him to seek his bed. Here he remained confined for over two weeks, during which his temperature, without any regularity, varied from 102° to 104.5° F. The discharges were of a foetid odour; the vomited matter, either half-digested food or acid mucus. By the end of the fortnight the fever left him, and he

was once more able to be about; but the vomiting, diarrhoea, anorexia and pain, and the loss in weight continued unabated. It was in this state that I first saw him on November 1, 1894.

I had known the patient previously, and was not a little surprised at the fearful change in his looks. He made the impression of a consumptive in the last stages, and even the red hectic spots, almost pathognomonic of that malady, were visible on his cheeks. He could scarcely keep himself in the upright position, so weak was he. The physicians had pronounced his case first one of walking typhoid and later one of acute malaria. There had been no bleeding from the nose, no general malaise preceding the first attack of colicky pain—which had set in abruptly in the midst of apparent health two hours after a meal—and the temperature record also disproved the presence of either fever. Upon physical examination I could detect no organic disease except an enlargement of the spleen. There were no rose-coloured spots; the abdomen was flat and sunken; there were no tympanites, no gurgling sound, and no tenderness whatever in the right iliac fossa. Neither had dysentery instigated the complaint; the patient never had any bloody discharge from the bowels, no feeling of a heavy weight in the rectum, and intestinal tuberculosis could also be excluded. Nowhere was there felt any pain on pressure, but the pain seemed to radiate from the middle of the descending colon, and to extend thence a little over to the other side, not much beyond the umbilicus. It seemed an ache with colicky exacerbations. The tongue was covered with a thick yellowish fur and evinced a tendency to dryness; no sordes. Sleep very restless. Pains and aches all over the body, reminding one almost of those accompanying trichinosis. The patient was an Israelite. Nothing else could be elicited except the general debility, which seemed to have seized upon every tissue. Urine slightly

* Reynold W. Wilcox, *The Preparations of Bismuth*. Read before the New York Clinical Society, December 15, 1894.

† *Loc. Cit.*

albuminous; no casts; no sugar; otherwise normal; quantity also normal and no disturbance in micturition. Temperature, 100.4° F.; pulse, 126.

The discharges were dark brown, highly offensive, fluid, frothy, and from six to fifteen in number daily. I took a small quantity with me in a bottle and injected some of it into the abdominal cavity of a rabbit. The animal seemed restless for about ten minutes, then appeared as if under the influence of some narcotic, and in about an hour after the injection it had four fluid stools in rapid succession, when it was suddenly seized with spasms and died. Except a congested appearance all over the small intestines, no lesion was visible at the autopsy. The bacteriological investigation showed the presence of five different kinds of micro-organisms, one of them resembling the bacillus of cholera morbus, but the tests have not yet been completed.

The patient had been in charge of able physicians; his diet had been carefully regulated and a great number of drugs seemed to have been tried in vain. I continued the milk diet that he had been on for several weeks, but insisted upon the milk being boiled and drunk hot, and prescribed for him cachets each containing five grains of beta-naphthol bismuth—three such cachets to be taken three times daily.

November 2nd.—Pain had lessened after the first dose of the bismuth the day before, and almost ceased after the third dose this morning, when it was scarcely perceptible. Vomiting occurred but once yesterday. Tongue begins to clear off; slept better; pains in joints stopped. The stools have greatly improved in odour and lost their dark colour and frothy appearance. Had only four discharges since first dose of medicine. Temperature, 99° F.

3rd.—No pain; temperature normal; no vomiting, but two stools of yellowish colour. Says that he feels much better and would like to eat something solid. Tongue but slightly coated; sleep undisturbed. Ordered

toasted white bread with butter, salt soda crackers, and poached eggs.

4th.—Appearance greatly changed for the better. None of the morbid symptoms returned. Tongue clean. Had one healthy-looking stool, though still soft. Ravenous appetite. Had a very good sleep for twelve hours, during which he did not wake once. Permitted more variety in his food.

5th.—Greatly improved in every way. Gained three pounds. Had no stool. Ordered to take but one cachet twice daily and to have a clyisma if the bowels did not move.

From this day on his recovery was rapid and uninterrupted, and two weeks later he had almost regained his former weight and robust appearance. I induced his parents to go with him to the mountainous country in Virginia. When he returned, a month later, he was the picture of health.

J. H., aged thirty-four years. After eating some oysters, November 11, 1894, was seized with cramps in his stomach and diarrhoea. Ordered beta-naphthol bismuth, fifteen grains, three times daily until better, then to take less. Stopped remedy after but two doses, because of the complete cessation of symptoms after second powder. Neither pain nor diarrhoea returned. Recovered.

W. D., aged fifty-four years. On November 12, 1894, called on me complaining of of looseness of his bowels, which had commenced a few days before after eating some ice cream and cake. It always set in immediately after eating. Some eructation. Tongue slightly coated. No other sign of any disease. Prescribed ten grains of beta-naphthol bismuth. Diarrhoea stopped after fifth powder, but, as he had a slight relapse a few days later, I caused him to take for a week five grains of the drug three times a day, then twice, and ultimately once a day. During the first week his bowels had to be opened several times by an injection. This constipation ceased with the withdrawal of the remedy.

C. M., aged sixty-one years. Suffers from frequently recurring attacks of camp diarrhoea, contracted during our late war and evidently due to old ulcerations and thickening of lower colon. Beta-naphthol bismuth controlled the diarrhoea perhaps quicker than any other drug (except opium and its preparations), but proved of no avail in the cure of the complaint.

J. R., aged two months. When, on November 20, 1894, I first saw this infant a priest present remarked that we should not torture the little thing, as it plainly was dying. I must admit I myself had scarcely any hope. When the little girl was nine days old the mother's breasts had suddenly ceased the secretion of milk, and the child had been fed in the most injudicious manner possible. The skin was wrinkled and dry; nothing but a withered integument seemed to cover its tiny bones. No ulceration, no specific disease. The baby vomited everything it swallowed and had from ten to fifteen fluid discharges daily. No treatment seemed to improve it. I insisted upon a trained nurse. Every vessel or utensil used for feeding was thoroughly disinfected and kept aseptic; the utmost cleanliness was enjoined; as diet, nothing but rice water to be given with some whisky added, and the following powders to be taken internally:—

Rt Pepsin.	Boudault	...	...	gr. iv.
Bismuth.	β -naphthol	...	...	ijj.
Pulv. aromat	...	...	...	$\frac{3}{4}$.
Pulv. Doveri	...	...	...	j.
Saccharin	...	...	...	q. s.

M. ft. pulvis. Sig.: One such powder to be taken three times daily.

The improvement was astonishing. Vomiting ceased the first day; the second the stools, previously of a greenish colour, yeasty and of a sour odour—as in cases of so-called acute dyspeptic diarrhoea, undoubtedly a misnomer—had assumed a healthier appearance and their number had been reduced to four; the third day the disease had actually disappeared. The baby recovered completely, and is as healthy

looking to-day as if it had never suffered from so formidable an attack as the one described.

M. F., aged five months. On December 3, 1894, I found this baby, also “artificially brought up,” from similar causes afflicted with the same disease and in nearly the same state as the foregoing. Having made similar arrangements concerning a nurse, disinfection, cleanliness, and a suitable diet to those in the first case, I prescribed the same powders as in J. R.'s case, except that I substituted the subnitrate of bismuth for the beta-naphthol preparation. Under its influence the vomiting became somewhat less severe, and there were also from two to three stools a day less, but otherwise no improvement discernible for three days, when I had recourse to beta-naphthol bismuth. Within twelve hours after the second dose a more decided change occurred; on December 7th the improvement was still more marked, and I increased the dose of the beta-naphthol bismuth by two grains.

December 9th.—Constipation had set in. This infant also made a perfect recovery.

I have administered the drug in a considerable number of cases, but those quoted will suffice to show the effect of the remedy. The more we have reason to suppose that the intestinal contents are in a state of fermentation brought about by the presence of pathogenic bacteria, the more the toxic products of the latter are responsible for the general impairment of the health of the patient, the more there is evidence of auto-intoxication—the more apparent and the more rapid will be the effect of the beta-naphthol bismuth. It far surpasses that of the older preparations of bismuth. In my opinion, and if I can draw such a conclusion from the cases under my charge, the beta-naphthol bismuth—while the most reliable intestinal disinfectant that we possess to-day, and combining with its antiseptic action an astringent effect—can be given with impunity in doses large enough and

for a sufficient length of time to achieve our purpose—the cure of diseases due to the presence of infectious material in the alimentary canal—in infants as well as in adults.

507 Franklin Street.

A CASE OF CARCINOMA OF THE CONJUNCTIVAL LIMBUS IN A CHILD OF FOURTEEN YEARS.

By Dr. Rogman,

Physician-in-Chief to the Ophthalmic Institute of Ghent.

Case.—On December 27, 1893, L. M.—, fourteen years of age, a native of T—, came to my clinic. On the corneo-conjunctival limbus of the right eye, in the lower internal region, was a small tumour which from its persistence had attracted the attention of the family physician, my distinguished colleague, Dr. St. Nicholas De Ryck. The tumour was of a yellowish-white colour, 3 millimetres wide, 4 millimetres long, its greatest diameter being parallel to the limbus, and it was raised about 1 or 2 millimetres above the sclera. Its surface was slightly nodulated, but not ulcerated. It did not encroach upon the cornea, and was not movable when the conjunctiva was moved over the sclera. On its peripheralside it was surrounded by a slight superficial vascularization, which by its colour contrast emphasized the pale yellowish tint. The tumour had been noticed for the first time one month and a half before this visit; the family, however, remembered that, for two years before, the eye became easily reddened by the wind or other irritating cause. There never had been pain in or about the organ; only for the last fifteen days the child had noticed, from time to time, a sensation like the prick of a pin. All the other portions of the eye were normal, and the function was regular. No ganglionic enlargements were found. There had never been an injury or any other noticeable cause which could have given rise to the disturbance. The child was in perfect health; he was the

youngest of five children, the eldest of whom was twenty-six years old, all of whom enjoyed the best of health. The parents are still living, and have never had any disease. There was no antecedent history of tumours in the family.

The tumour was removed with a bistoury, the blade gliding along the sclera, and then the surface of implantation was energetically curetted.

The after treatment was very simple, and no complication occurred. The wound recovered without leaving any other traces than a slight spot of venous tint (thinning of the sclera from the grattage), which still persists.

Anatomical Examination.—The tumour was hardened in the chromo-osmic fluid of Flemming and imbedded in celloidin.

It was cut parallel to the surface. The sections, about forty in number and taken at different depths, were coloured with safranine, and were divided into three series—superficial, median, and deep. The tumour had somewhat the form of a truncated cone flattened at the side, and by comparing the sizes of the sections it was easily seen what relative positions they had occupied.

The structural arrangement was the same in all of them: at the periphery, in almost the entire circumference, was a border formed of conjunctival epithelium; in the centre, the body of the tumour.

The conjunctival border was much wider at the two angular extremities of the section than at the sides, probably because the razor had encountered the conjunctiva in a direction more inclined to its surface. It was formed of pavement epithelial cells progressively smaller, more flattened, and serrated near the periphery, more globular, and less exactly united in the deeper part. In some places the intercellular spaces were quite large; they formed actual vacuoles, where here and there were seen immigrated white corpuscles, assuming various forms and with filaments stretching from cell to cell; these filaments were very well marked

in places: they formed what are known as intercellular bridges.

In half of the sections the epithelial layer was quite sharply limited from the subjacent tissue, but in the second half it was prolonged in tracts into the tumour proper. These tracts were continuous there with cellular groups surrounded by bundles of connective tissue; the cells forming these groups had almost all preserved their more or less globular form, while some were slightly compressed; their nucleus was sometimes small, sometimes deeply stained, rounded or oval, and ordinarily quite regular. Intercellular bridges were here found.

In the second half of the sections the cellular groups had a different appearance: crowded together in the midst of an abundant connective tissue, the cells which composed them were pressed concentrically together; they were flattened, horny, and covered each other like the layers of an onion, and at the centre they completely lost their form and were replaced by an amorphous substance strongly coloured by the safranin. In some places these horny cells were found not only near the amorphous central substance, but also at the periphery, the two layers being then separated by cells, which had preserved to a greater or less degree their form, with protoplasm and nucleus. The external horny layer sometimes surrounded two contiguous centres of degeneration (1). The epidermic globes thus formed were about twenty in number; they were situated, as I have said, for the most part in the sub-epithelial cellular tissue, but some were also found in the epithelial covering and in the complex tissue of the first half of the tumour described above.

The superficial layers were distinguished by the relative predominance of epidermic tissue. In the deeper layers the conjunctival tissue became more and more predominant. The portion of the sections which corresponded to the first half of the proper tissue of the tumour was formed of a reticular tissue, in the meshes of which were found

numerous white corpuscles. The epidermic globes penetrated to the deeper layers. Numerous newly-formed blood vessels were found in all parts.

The anatomical diagnosis was then unquestionable. This was a commencing epithelial carcinoma of the conjunctival limbus.

Malignant tumours in the ocular conjunctiva, as well as in all other parts of the body, are proper to old age, and it is rare to see them appear before the age of forty (Panas). In studying the literature on this subject, I have only been able to find seven cases in younger patients: one case of Dujardin (a child of twenty months); two others of Panas (twelve, and thirteen and a half years); another of Keyser, in a young man nineteen years of age; that of Lagrange (*Transactions of the French Ophthalmological Society*, 1892, p. 81), occurring in a man twenty-seven years old (epithelioma situated between the caruncle and the limbus); still another of Valude (*Ophthalmological Society of Paris*, December 1, 1891), in a man thirty-five to forty years of age (epithelioma of the limbus); lastly, the case of a man thirty-seven years old presented by Bousquet to the Anatomical Society of Paris, November 3, 1876 (encephaloid carcinoma).

The nature of malignant tumours of the limbus has caused much controversy. Clinically, sarcoma is differentiated with difficulty from epithelioma. In an article which appeared in von Græfe's *Archives* (*Zur Casuistik der an der Hornhautgrenze vorkommenden Carcinome und Sarkome*) (2), Berthold gives the following differential diagnosis between these two tumours: 1st, in carcinoma the adhesion of the neoplasm to the cornea is more intimate on account of the greater thickness of the epithelial layer in the latter; 2nd, the borders of the sarcoma are raised perpendicularly from the cornea and the sclera, those of carcinoma are inclined; 3rd, the tissue of carcinoma is very delicate and fragile, that of sarcoma

is of a firmer consistency. The literature of the subject shows, however, observes Heyder (3), that these characters are far from being constant. In my case there was concordance with the second symptom, but not with the third, as the tumor was dense and hard.

According to Panas (1), the structure of tumours of the limbus is more frequently mixed.

In affections of the conjunctival limbus, the diagnosis which it is important to determine immediately is between malignant tumours, on the one hand, and benign tumours and inflammatory processes, on the other hand. When these disturbances are just commencing, there may be considerable difficulty in distinguishing them. Malign tumours may be mistaken for a papilloma, a pinguécula, a dermoid, and, above all, they are easily confounded with phlyctenular disturbances, especially when their principal differential symptom, that of age (1), is lacking. My case, however, proved, and this circumstance gives it a peculiar interest, that the presumptive diagnosis based on the persistence and the continued development of the process should suffice in cases of this kind to authorize and even to impose intervention. Indeed, the preservation of the eye may depend upon prompt and energetic action.

The treatment of malignant tumours of the limbus has been the subject of numerous discussions in recent years. While some ophthalmologists advise immediate enucleation of the eye as soon as the neoplasm has been recognized, others are content with a local treatment, and do not concede the necessity of enucleation until the tumour has reached a certain size (Caspar) (2). Still others (Valude) (3) claim that epitheliomas of the sclero-corneal limbus, which, in general, have no tendency to extend either upon the cornea or the sclera, present rather the indications for local extirpation.

When examination shows that the media of the eye are still completely exempt it is

nearly always proper to try local extirpation, even when, according to Professor Knies (2), there has already been a recurrence, as in one of my cases. But care should be taken to remove the tumour as completely as possible by finishing the operation with the galvanic or thermo-cautery, or rather with energetic curetting of the surface of implantation. Knies and Sgrosso (3) draw over the neighbouring conjunctiva and fix it to the operative wound. Although this practice is formally condemned by Lagrange (4), I think that one should be guided according to the supposed nature, progress, and extent of the affection, and that it is not necessary to systematically renounce the advantages of a covering, at least partial, of the wound, which the superimposed conjunctiva, on account of its slight thickness, does not completely hide from view.

Enucleation of the eye should not be performed, especially in the early stage, until perforation or extended invasion of the enveloping membranes of the eye does not allow of simple ablation under favourable conditions, but demands complete removal of the neoplasm.—*From Annales d'Oculistique.*

CASTRATION IN HYPERTROPHY OF THE PROSTATE GLAND.

When Dr. J. William White first suggested to the profession the operation of castration for the relief of hypertrophy of the prostate gland (Address at the Annual Meeting of the American Surgical Association, June 1, 1893, *Annals of Surgery*, August, 1893) on theoretical grounds, although strongly supported by experimental evidence, it is doubtful whether any one appreciated the full value of the recommendation. Cases of prostatic hypertrophy are of extreme frequency. Sir Henry Thompson found that one man of every three over 24 years of age examined after death showed some enlargement of the prostate; one in every seven had some degree of ob-

struction present ; while one in fifteen had sufficient enlargement to demand some form of treatment. In this country to-day, as shown by the last census, there are more than three millions of men over fifty-four ; of these, according to Thompson's estimate, which genito-urinary specialists consider a conservative one, about two hundred thousand are sufferers from hypertrophy of this gland. This number seems very large, but the assertions of Thompson unquestionably express a general rule, and in fact every surgeon must have seen men in whom some prostatic overgrowth existed *before* the fifty-fourth year. The lives of such patients are threatened, because, if the obstruction is not removed, the health is rapidly undermined by the retention of urine and the consequent fermentative changes, the deleterious influence of backward pressure on the kidneys, the frequent use of the catheter, and the loss of sleep incident to the incessant demands to void urine. Heretofore the surgeon has been unable to afford distinct relief from the distressing symptoms of an advanced case of this affection. If the patient's general condition would warrant the very considerable risk some form of prostatectomy was performed. The suprapubic method was recommended for a time, but the difficulties encountered in its performance, the frequency of suprapubic fistula as a sequel, and the high mortality following the operation have led to its almost total abandonment. Perineal prostatectomy is also attended with considerable risk, on account of the free hemorrhage, which cannot be controlled during the operation, and the prolonged anesthesia which is necessary. In addition to this the operation is a bungling one ; the enlarged gland is removed by cutting, scraping, or gouging, while the instrument is out of sight, and much of the time it cannot be guided even by the finger. Combined suprapubic and perineal prostatectomy enables the operator to reach and enucleate the gland with greater freedom, but it is

an operation of such gravity that it would be contraindicated in the very cases in which the demand for relief was most urgent.

Perineal prostatotomy is little more than a palliative measure, which does some good, temporarily, by draining the bladder and inducing slight contraction of the middle lobe of the prostate in the healing process. All of these operations confine the patient to bed for several weeks, which is, in itself, objectionable, and in addition require the use of the bougie for a long time afterwards.

In view of these facts it is not strange that surgeons should have presented Dr. White's suggestion to patients suffering from the consequences of prostatic hypertrophy, nor is it unnatural that such patients accepted this chance for relief from a condition that in many cases was rapidly and surely impairing the health of a person otherwise vigorous and, apparently, without this trouble, destined to enjoy many additional years of life.

With the testes already or soon to become functionless, and with the contemplation of a long period of intense suffering which will be relieved only by death, sentimental objections pale into insignificance, and the problem of securing relief without placing the life in danger is the only one entitled to consideration.

Cases of castration based upon Professor White's deductions soon began to be reported. Ramm, of Christiania, Norway, recorded two in September, 1893 : Haynes, Los Angeles, Cal., and White, Philadelphia, each report three cases ; Finney, Baltimore, reports two cases ; Smith, St. Augustine, Fla., Powell, London, Mayer and Haenel, Dresden, Moullin, London, Thomas, Pittsburgh, Ricketts, Cincinnati, Swain, Bristol, England, and Bereskin, Moscow, each record one case. Thus far eighteen operations have been published. All have been more or less successful, and usually the relief from the distressing symptoms and the shrinking of the prostate have been

marvellous. The least favourable cases have experienced infinitely greater relief than has been obtained by any method heretofore employed. At least as many unpublished cases have been operated upon with equally favourable results. There have been no deaths from the operation: of course, few would be expected in the hands of competent surgeons.

To those familiar with these cases the rapid shrinking of the prostate and the simultaneous relief afforded the patient have been truly wonderful. The operation has therefore passed the experimental stage, and has legitimately established for itself a position among the most successful of operative procedures. Indeed, the results have been so uniformly favourable that castration may now be considered a specific for hypertrophy of the prostate.

It is necessary, however, to utter a word of caution here. Castration is not indicated in every case of prostatic enlargement or urinary obstruction. To secure uniformly successful results one must be certain that the condition from which the patient is suffering is appropriate for the operation. Cases of prostatic abscess, prostatitis, tumours of the prostate and of the region of the neck of the bladder, and other forms of obstruction in the neighborhood of the prostate must be distinguished from true prostatic hypertrophy. Without careful discrimination, both the surgeon and the patient will be disappointed, and the operation will unnecessarily be brought into discredit.

As it stands to-day, however, in appropriate cases, it appears to mark an advance in the surgery of the prostate, which, when the gravity and the frequency of the condition of hypertrophy are recalled, together with the more or less ineffectual and always dangerous methods of treatment which have prevailed, must be a source of congratulation not only to Professor White but to the profession at large, and to thousands of patients who, having outlived

there sexual lives and earned an old age of mental and physical repose and intellectual enjoyment, have had only a few short years of torment and misery to look forward to on account of this hitherto intractable disease.—*Pennsylvania University Medical Magazine.*

THE TREATMENT OF ACUTE CORYZA.

The *Journal des Praticiens* for January 26th publishes an article on this subject by M. MARCEL LERMOYEZ, who remarks that there is a very widespread opinion that coryza is always a benign affection that does not call for treatment, and, moreover, that therapeutics has no influence over it, a double mistake of which many persons have been the victims.

Acute coryza, says M. LERMOYEZ, from a pathological point of view, should not be neglected. It may leave in its place a chronic purulent discharge, or predispose the patient by repeated attacks to hypertrophic rhinitis; and its effects which manifest themselves in other parts are still more to be feared. Occasionally it spreads to the lacrymal sac or to the frontal sinus and causes persistent suppuration. Or, again, it infects the middle ear and leads to the necessity of trephining the mastoid; finally, it is very often the origin of descending broncho-pulmonary infection.

Medicine, says the author, is not so powerless against coryza as is supposed. It may moderate the disease at the outset; it may palliate painful symptoms in a marked degree; and very often it may prevent the complications which are provoked by coryza. There are innumerable abortive remedies and certain local means which, if employed when dryness of the mucous membrane is first observed, give excellent results. But if at the end of twelve hours their effect is not visible, their use must be stopped, as their irritating action, if kept up, will increase the intensity of the coryza. An excellent solution for inhalation, known as BRANDT'S

remedy, is the following: Pure carbolic acid and ammonia water, each, 75 grains; alcohol, 150 grains; distilled water, 225 grains. Every hour ten drops of this solution should be poured on blotting paper and the vapours inhaled by the nose for several seconds.

Among the abortive powders the following, which should be very finely pulverized, is preferred by M. LERMOYEZ: Cocaine hydrochloride, 8 grains; menthol, 4 grains; salol, 75 grains; boric acid, 225 grains. A pinch of this is to be snuffed up every hour; it provokes an abundant mucous discharge and affords great relief.

Among the internal abortive remedies there is only one, says M. LERMOYEZ, that is comparatively reliable, and that is the mixture, in equal parts, of tincture of belladonna and tincture of aconite root, of which thirty drops are to be taken in divided doses. Energetic sweating, also, induced by a vapor bath has occasionally given beneficial results. These abortive means are sufficient in ordinary cases. In certain subjects, however, coryza brings, almost inevitably, with each attack, serious otic or bronchitic symptoms, and more energetic means are required. The patient should remain in bed, and revulsion should be practised on the legs; abundant perspiration should be brought on by means of hot alcoholic drinks, by a potion of ammonium acetate, or by DOVER's powder.

If the coryza itself cannot be moderated the most painful symptoms, which are nasal obstruction and headache, may be ameliorated by the palliative treatment. For this nothing is so good as the use of a RICHARDSON spray with a boiled and tepid one per-cent. solution of cocaine hydrochloride; this brings real relief, freeing the nose and at the same time suppressing the pain in the head. Spraying every two or three hours is sufficient. The cocaine may also be incorporated in powders that are slightly antiseptic but not irritating. The following formula is given: Cocaine hy-

drochloride, 8 grains; menthol, 4 grains; bismuth salicylate and sugar of milk, each, 75 grains. If there is reason to fear cocaine poisoning, 300 grains of pure olive oil and 30 grains of menthol may be administered by the spray and not by painting, which may produce an erosion, especially if the patient attempts to do it himself.

In order to quiet the neuralgia of the trigeminal nerve which often accompanies coryza, says M. LERMOYEZ, as well as to combat the general infection which manifests itself in chills and lumbago, a capsule containing four grains of quinine hydrochloride and eight grains of antipyrine is to be taken at each meal. To prevent erythema of the orifice of the nostril, the entrance of the nose and the upper lip should be rubbed with vaseline with which boric acid has been incorporated. Finally, several hygienic prescriptions are indicated. If there are no general symptoms the patient may go out; if there is fever he should remain in his room. He must avoid sneezing as much as possible, and refrain from blowing his nose too energetically, as there is danger of projecting septic mucosities into the middle ear. Irrigation of the nose at the acute period of coryza should be absolutely interdicted, as it results in a constant irritation of the mucous membrane and increases the tumefaction; furthermore, it constitutes a real danger for the ear. On the other hand, it finds its indication afterward when a mucopurulent secretion follows coryza, which tends to become chronic. Then the treatment should be the same as that employed in chronic purulent rhinitis.

The prophylactic treatment, says M. LERMOYEZ, has a great importance for certain persons in whom coryza sets in on the least exposure to cold. These persons should become accustomed to the inclemency of the weather; they should exercise in the open air; and cold douches and salt-water baths should be taken; at the same time underclothing and stockings of wool, also

shoes with heavy soles should be worn. The chronic lesions of the nose, which are the starting point of acute attacks of rhinitis, should be treated. These lesions are, ordinarily, adenoid growths in infancy and hypertrophic rhinitis in adults. It is not rare to find that, among the latter, ablation of the hypertrophied turbinals will cause the cessation of repeated attacks of coryza.

Acute coryza in the newborn, says the author, is a very serious affection. It disturbs the sleep and prevents the child from nursing, and the patient wastes away rapidly. In these cases the nasal obstruction should be removed at once by applying several drops of a two-per-cent oily solution of menthol to the nasal fossa, which detaches the crusts at the opening of the nostrils and provokes momentary retraction of the turbinals. The mentholated oil, which is entirely harmless, is preferable to cocaine solutions, which, at that age, cause very serious toxic symptoms and should, for this reason, be proscribed.

Before the child nurses the secretions which obstruct the nose should be removed by means of a dry douche given with a POLRZEK's bag. One moderate insufflation into each nostril is sufficient. This very simple procedure is preferable to nasal irrigation, which should be reserved for cases of purulent rhinitis. With regard to intubation of the nose, which consists in introducing into the nasal fossæ rubber tubes to establish an air-passage, this is a dangerous method, says the author, which wounds the mucous membrane and gives rise to synechiæ. If the child, in spite of this treatment, cannot breathe sufficiently through the nose to admit of its nursing it must be fed with a spoon. The best prophylactic treatment for coryza in infants is not to allow them to go out too soon after birth, especially in damp weather; also, in bathing them, soapy water must not be allowed to penetrate the nose.

THE INDIAN MEDICAL CONGRESS, CALCUTTA.

Constitutional Malaria in the Tropics.— Surgeon-Major L. T. YOUNG considered the pathological condition produced by malaria and the functional effects of alkaline salines. Even a rather casual inspection at numerous necropsies leads to the adoption of the opinion that malaria congests the internal organs and causes catarrh of the mucous membranes. A proper recognition of these two facts and their results may be considered the key to the successful treatment of the constitutional effects of malaria. It is rare at an Indian necropsy to find a liver free from congestion of some form or other. In many instances the appearances are distinctly those of incipient "nutmeg" congestion; whilst in advanced malarial cases there is distinct cirrhosis of an hypertrophic kind following, to some extent, as the result of long-standing congestion, according to the well-known pathological law. This cirrhosis is not the ordinary "hob-nailed," contracted surface form, but the enlarged, hypertrophic, morocco-leather surface form, which commences in and around the bile-ducts, and which, he suggested, begins as a catarrh of these channels in a manner similar to that in which catarrhal malarial enteritis supervenes on tropical intestinal catarrh. Tropical hepatic congestion is always associated with more or less fatty infiltration of the liver-cells. The acute results comprise hepatitis, abscess, perihepatitis, dysentery, catarrh of the bile-ducts, etc. The chronic results embrace the various forms of imperfect proteid metabolism or liver indigestion; also gout, rheumatism and possible diabetes, etc. The early congested and the late cirrhotic stages of the spleen are only too well known. The organ, or its capsule, sometimes becomes inflamed; the enlargement of the organ may reach an enormous size, sufficient to almost fill the entire abdomen. In the later stages ascites supervenes, anæmia and debility, with a tendency to sudden death from pulmonary

thrombosis, as so ably described by Sir JOSEPH FAYRER. These kidneys are nearly always found congested, often intensely so. Of the later stages the large white kidney has been the most frequent in his own observations, not the cirrhotic form as one would have expected. Acute desquamative nephritis is not a rare complication of severe malarial fevers, and it is often in the slighter degrees overlooked, and gradually assumes the fatal chronic form. The dietetic errors to which Anglo-Indians as a class are so much addicted are also largely to blame for many cases of Bright's disease. All the mucous membranes of the body become sooner or later affected by catarrh from malaria and residence in a tropical climate. Pharyngeal and laryngeal catarrhs are generally the earliest to occur. The latter spreads with great frequency up the Eustachian tube, giving rise to otitis media, which often goes on to suppuration with loss of the membrana tympani and ossicles, or to plastic inflammation sealing up the ossicles into the fenestræ, and so causing deafness. The Schneiderian membrane shares the same fate, and hyperplasia of it over the turbinated bones is a common result. Slight chronic ophthalmia attacks the conjunctivæ. The lining of the uterus becomes endometritic. The most important catarrh, however, is that of the stomach and intestines. Under the influence of repeated "long drinks," large meals and hot weather the stomach becomes dilated; its glandular structures degenerate and atrophy, leading to the secretion of gastric juice imperfect in quality. An ague patient who has had a drink of milk half an hour previously brings it up perfectly uncured, showing the complete absence of acid from his stomach. The thickly-loaded, large, flabby, indented "tropical tongue" is a frequent sign of tropical gastric catarrh. The intestinal catarrh often causes not alone obstructive jaundice but ramifies and extends along the bile-

passages in its more chronic forms. This, as already suggested, may act as the starting-point of biliary cirrhosis. Catarrhal enteritis is a common and extremely fatal consequence of extension of intestinal catarrh to the substance of the intestine from its mucous membrane, and its occurrence is favoured by the mechanical obstruction to the return of blood from the chylipoietic viscera by a chronically-congested liver. This enteritis is not a sthenic form of inflammation accompanied by the exudation of lymph, nor does it usually excite the overlying peritoneum to effusive inflammation. The bowel—usually pale, thinned and anæmic from a malarial atrophy—is, when enteric, darkly congested, thickened, and its mucous membrane soft and vividly injected. The peritoneal side of the bowel is also red and injected. Long tracts of the bowel are not affected in this intense manner, but only patches of a foot or two. The spaces between these present all the signs of chronic congestion or of incipient inflammation, with signs of vascular dilatation and blood-stasis. The congestion is usually most marked about the ileum. There is no trace of any ulceration of Peyer's patches or of the mucous membrane. A patient who recently died at the Umbala Hospital from this affection had grass-green diarrhoea, just like a child with irritative diarrhoea. The colour of the motions in diarrhoea is mostly either pale or dark. I have not often seen it green in adults. Malarial degeneration or atrophy of the heart also occurs in advanced cases. This organ is found pale, thin, small and flabby. The ventricular walls are reduced to about half their normal thickness. There are atrophy and fatty degeneration of the muscular tissue. Severe and long-continued malarial fevers often produce paresis or paralysis, motor or sensory, or both, of the lower limbs. This was found to be due to spinal pachymeningitis.

In regard to the treatment by Carlsbad water the speaker said that patients must

be prepared to devote two hours each morning to drinking the water in the proper manner. On getting up in the morning a dose of $6\frac{1}{2}$ ounces (200 cubic centimetres) of the natural or artificial water made from the salts and warmed to a temperature of 120° F. (48.9° C.) should be slowly sipped as it cools. After this a walk of twenty minutes in the open air is taken, and then another $6\frac{1}{2}$ -ounce dose; a second walk of twenty minutes and a third similar dose are next indulged in. This is followed by a walk of one hour, after which the patient can have a simple breakfast. Some patients are given an extra dose of the water at 11 a.m., and another on going to bed at night. This latter has a great effect in cleaning the thickly-furred "tropical tongue." During the course the following articles of diet are strictly excluded: fresh fruit, salads, acids, cheese; tinned, dried or smoked fish and butter. Sweets, greasy dishes and strong wines or short drinks are also to be avoided.—*Lancet*, January 19, 1895.

THE MORBID ANATOMY OF THE LUNGS AFTER INFLUENZA.

LOUIS B. HAYNE, of St. George's Hospital, London, discusses the various pathological changes visible to the naked eye in the lungs of victims to the recent epidemics of influenza. The mortality of influenza seems to be mainly due to involvement of the lungs, the deaths from the virulence of the febrile attack and from implication of the digestive tract being comparatively few. These pulmonary complications were not only fatal to the young and the aged but also to adults in the prime of life; death generally occurring about the tenth day after the onset of the attack.

In the cases of pneumonia occurring in influenza the peculiar smooth aspect of the consolidated lung noted by RIBBERT (*Lancet*, vol. i, p. 1,318, 1892) has been frequently observed in the deaths from recent epidemics, alone as well as with associated areas

of broncho-pneumonia. The solid lung often appears to be composed of a number of patches of broncho-pneumonic consolidation, these patches having run together and involved the entire lung, suggesting the appearance of a confluent broncho-pneumonia rather than that of the croupous variety of pneumonia. Some lungs, on the other hand, show the results of ordinary lobular pneumonia; this condition being observed in early adult life quite as frequently as in youth or old age. Broncho-pneumonia, rare under ordinary circumstances in an adult, except cases of septic origin, is by no means uncommon as a complication of influenza, but the confluent type just referred to is even still more common. This is often found in the same lung in conjunction with a red hepatization, the gray, isolated patches of consolidated lung-tissue around a small bronchus contrasting very plainly with the uniform red and congested appearance of the remaining tissue. These patches often seem to originate in the posterior borders, and thence to spread to the apices and sides, so as eventually to involve the whole lobe. In other cases the apices are the parts first affected; apical pneumonia being more frequent than any other condition in influenza.

In some cases pale patches of broncho-pneumonia have been found scattered throughout the lung, suggesting at first sight tubercle of the miliary type. Under the microscope the small bronchi are seen filled with fibrinous plugs; the cells lining the bronchi have undergone proliferation, some having escaped into the lumen of the tube; the alveoli in the neighborhood are crowded with catarrhal cells, and the blood-vessels in the surrounding tissue are dilated and crowded with corpuscles, some of which appear to have escaped from the vessel walls into the pulmonic substance. These patches are distinct around each bronchiole, but run into one another at the periphery. The distribution is thus broncho-pneumonic while the character of the exudation resem-

bles that met with in lobar pneumonia. As in broncho-pneumonia the localized patches of consolidation are accompanied with collapse of the neighbouring lung-tissue, due to a similar cause, viz., the blocking up of the bronchioles with exudation and the consequent removal of the air from the alveoli in communication with the bronchioles at fault.

Localized patches of pleurisy, characterized by the adherence of the pleural surfaces to each other by means of recent lymph, are also frequently present, and arise from an extension of the inflammation from the superficial patches of consolidated lung-tissue. Pleural effusion is rare, not one case being found among the records of post-mortem examinations at St. George's Hospital during the recent epidemics of influenza.

Besides the capillary bronchitis, which generally terminates fatally, inflammation of the larger tubes is very common. The bronchi are found to be congested, their inner walls often being covered with thick, tenacious mucus; as a rule the larger tubes are not so deeply congested as the smaller ones. They are usually filled with muco-pus, and in some cases are so distended with purulent secretion that on being cut across they look exactly like small abscesses, varying from the size of a pea to that of a pin's head. The whole thickness of the bronchial wall is considerably softened, accounting for the dilatation of the tubes so often present. Occasionally the walls are so dilated that a condition of acute bronchiectasis is simulated. The dilatation involves the whole length of the tube, but more markedly its terminations, being thus of the cylindrical variety. Clinically, however, the typical symptoms of bronchiectasis are not manifested, though the expectoration may be very profuse. The contents of the tubes are not always muco-purulent in character, but are sometimes quite fibrinous or membranous.

In most cases there is present not one of the conditions just described, but a number of them. One lobe may be in a state of

solid, gray hepatization, another may be studded with disseminated patches of consolidation of varying sizes, while at the same time the bronchial tubes may present any of the morbid conditions above noted.—*Practitioner*, October, 1894.

INDOLENCE OF THE CÆCUM IN CHILDREN.

Dr. JULES SIMON, in a clinical lecture, calls attention to this condition as occurring in children of sufficient age to be left considerably to themselves. They eat in a careless manner, and frequently eat too much. The food remains in the cæcum and large intestine, giving rise to such symptoms as headache, incapacity for study, paleness and irregular and capricious appetite. Although there is a daily movement of the bowels this is not sufficient, and the cæcum and colon, on palpation, will usually be found sensitive and engorged. In such cases M. SIMON employs a symptomatic treatment against the constipation and hygienic and preventive measures against the return of the trouble. Every morning he gives sweet almond-oil, 15 grammes ($3\frac{1}{2}$ fluid-drachms); castor oil, 20 to 30 drops; or a tablespoonful of syrup of rhubarb in water; or an infusion of sennalaves in coffee or chocolate with milk.

Before the two principal meals he gives a pill containing 0.01 gramme ($\frac{1}{4}$ grain) each of extract of hyoscyamus and powdered hyoscyamus, and after the meal an elixir or a cachet composed of cream of tartar, 0.10 to 0.15 gramme ($1\frac{1}{2}$ to $2\frac{1}{4}$ grains); vegetable charcoal, 0.05 to 0.10 gramme ($\frac{1}{4}$ to $1\frac{1}{2}$ grains); calcined magnesia, 0.20 gramme (3 grains). There are cases in which this treatment fails, and it becomes necessary to substitute half a glass of a natural laxative mineral water, returning later to the above prescriptions, or giving cascara or magnesia. The most important point is to prevent alternating diarrhœa and constipation.

As external treatment, friction and massage of the abdomen and continued electric

currents, if necessary, are employed, and if there is any congestion of the cæcum or pericæcal ganglia the parts are painted with tincture of iodine or small blisters applied.

Dr. SIMON believes the diet to be of great importance and advises that no solid foods be taken, but that meats, fish, etc., be reduced to a fine pulp, and vegetables be given in the form of a *purée*.—*Journal des Praticiens*, January 19, 1895.

UNITED STATES.

College of Physicians of Philadelphia.

Strontium Salicylate.—Prof. H. C. WOOD calls attention to this drug as one likely to prove a valuable addition to everyday therapeutics. After using the lactate, iodide, and bromide of strontium very freely he came to the conclusion that the strontium element materially modified the action of haloid bodies on the alimentary canal. This suggested the possibility that strontium might modify the action of salicylic acid; so he had a strontium salicylate prepared, and experimented with it upon dogs, determining that in therapeutic doses it elevates the arterial pressure, and that to depress the blood-pressure and circulation larger amounts of it per kilo ($2\frac{1}{2}$ pounds) are required than of the sodium or even of the ammonium salicylate. He afterward employed it largely in practice, and found, somewhat to his surprise, that in doses of 5 grains (0.23 gramme) it is one of the best of intestinal antiseptics, yielding better results than salol, naphthalin and similar agents. In doses of 10 or 15 grains (0.65 to 1.0 gramme) it acts very decidedly as a salicylate in gouty and chronic rheumatic conditions, without producing disturbance of the stomach. It may be given in capsules. When large quantities are administered it produces cinchonism, but it seems to be less active and powerful in acute cases than is the ammonium salicylate. In chronic

gouty conditions and lithæmia with intestinal indigestion it appears to be the most valuable drug that we have.—*British Medical Journal*, January 5, 1895.

EXTRA-PERITONEAL CLOSURE OF ARTIFICIAL ANUS AND FÆCAL FISTULA.

By J. Greig Smith, M.B., F.R.S.E.,

Professor of Surgery, University College, Bristol; Surgeon to the Bristol Royal Infirmary.

During the past few years I have had to deal with a number of cases of fæcal fistula left after intestinal drainage in cases of obstruction; and also with some cases of artificial anus left after intestinal resection for malignant disease and for gangrene associated with obstruction. The method I employ is so safe, and has been so uniformly successful, that I think a short description of it may be acceptable.

The aim of the operation is to perform enterorrhaphy without opening the general peritoneal cavity; and this is managed by detaching from the parietes all round the fistula or anus sufficient peritoneum to permit delivery of the gut through a parietal incision without separating it from its peritoneal adhesions.

It is unnecessary to emphasise the importance of being able to deal with an intestinal fistula without opening the general cavity. This is the main feature underlying the procedure I advocate; and no arguments in its support need be adduced. But in respect of another feature, the approximation of surfaces not covered with peritoneum but simply raw or covered with cicatrix, for the purpose of closing an opening in intestines, some argument may be necessary.

Too much has been made of the agglutination of peritoneal surfaces in abdominal surgery. It is true that irritated peritoneal surfaces very soon become glued together by lymph. But such union is neither permanent nor strong. It serves a useful purpose by preventing leakage till

true union by vascularised granulations takes place. It is by no means certain that two apposed surfaces of intact peritoneum unite as quickly as two surfaces denuded of peritoneum. The process of vascularisation, which is essential to true union, is not likely to be so rapid where a double layer of intact endothelium has to be pierced as where there is no such obstacle. Whether this be true or not, it is certain that in practice the fallacy of peritoneum to peritoneum has been proved again and again, and need not further be insisted upon. Here I do not seek to push this thesis to its full outcome: all I desire to insist upon is, that an opening in gut can be closed as satisfactorily and as speedily by the apposition of rough cicatricial tissue on its surface as by the apposition of intact peritoneum. The operation I suggest brings raw surface to raw, and does not involve peritoneum. There is a sufficiency of proof that it is successful and safe, and there is no need to carry the argument further.

Between the parietal peritoneum and any discharging intestinal opening is a circle of adhesions binding the bowel to the parietes. These adhesions are left intact. The bowel is delivered through an incision carried above and below the parietal opening along with parietal peritoneum, which is separated from the parietes to any extent desired. The chief element in the operation is this separation of parietal peritoneum, with its fat, all round the fistula. It is remarkable how much freedom for manipulation a peritoneal stripping of an inch all round will give. A stripping over a circle of two inches radius will permit the gut to be delivered completely through the wound. The detachment is begun at a distance from the fistula, and carried down to it; it may be done almost entirely with the fingers. Further details may now be given.

Fæcal Fistula.

Here the bowel does not protrude through the parietal opening, and there is no spur, or only a slight one. A simple fistula lined

with granulations leads from skin to bowel.

The granulations are first scraped from the sinus by means of a small sharp Volkmann's spoon, and the parts around are purified. If there is any discharge from the intestine, a small sponge with string attached is pushed through the fistula so as to block it.

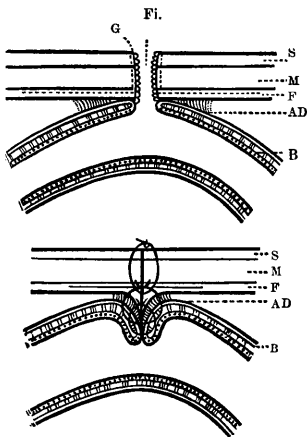


Fig. 1.

Diagrams to show method of Closing Fæcal

Fistula.

Fi. Fistula in abdominal wall communicating with bowel.

G. Granulations lining fæcal fistula.

S. Skin. M. Muscular layer. F. Sub-peritoneal fascia.

AD. Adhesions between bowel and peritoneum surrounding fistula. B. Bowel.

Broken line in upper diagram shows incisions around fistula and in sub-peritoneal areolar tissue. Lower diagram shows operation finished and sutures placed.

Two incisions are now made in the parietes, with the fistula as centre, down to the sub-peritoneal areolar tissue. Their direction is to be guided by that of the principal muscular fibres in the parietes, so as to avoid their division and thus minimise weakening of the parietes. A fistula in the middle line would have vertical incisions

above and below it; in the loin it would be vertical or oblique, as we desire to preserve the fibres of the internal oblique muscle, or external oblique muscle and aponeurosis. The incision comes up to, but does not pass through, the fistula; it is carried round the fistula; the fistula with the cicatricial tissue surrounding it is bodily removed. The parietal incision goes down to the sub-peritoneal areolar and fatty tissue, but does not go through it. Then with finger and scissors the parietal peritoneum with its fat is detached from the muscle all round the fistula for a distance of from one to two inches. When the separation is complete, the fistulous tract is removed down to the gut. The bowel remains attached to the parietal peritoneum by adhesions around the fistulous opening. By means of forceps placed close to the opening, the bowel, with its attached peritoneum, may now be lifted out through the incision in the parietes. If there is any difficulty in doing this, a little more detachment of peritoneum will make it easy. The opening in the gut is now closed by infolding of the raw areolar surfaces around the fistula and suturing by Lembert's method, as if smooth peritoneal surfaces only were involved. The line of closure may be vertical or transverse, as seems best. Two layers of closely-placed sutures, one continuous (Dupuytren), suffice for closure. The outer row will engage some of the sub-peritoneal areolar tissue, and should have a considerable grip of material. The sutured gut and peritoneum is pushed inside, and the parietal wound closed over it by silkworm gut sutures in the ordinary way. A small drainage tube laid over the line of gut suture adds to the security by preventing burrowing of fluids in case of leakage.

Artificial Anus.

Here the intestine itself forms the surrounding of the fistula; the mucous membrane of the bowel and the skin are practically continuous. There may be ectropion of intestinal mucous membrane

or of the whole bowel. There will always be a spur more or less perfect, and, according to its perfection, requiring previous treatment. If there has been loss of bowel from resection or gangrene the spur will be dense and unyielding, but it need not be so large as when it is made simply by kinking.

In every case where the spur is well developed, or where the intestine below the artificial anus is contracted, it will be wise to devote a few days before operation to the amelioration of both conditions. For these purposes I have found Mitchell Banks's ingenious method, by means of a piece of rubber tubing, quite efficient. The tubing, if introduced on the stretch, may be of considerable dimensions. It rests comfortably in the large entering gut; dilates the contracted efferent gut, and presses back the encroaching spur (*Fig. 2*). It is kept in position by a loop of aluminium wire,

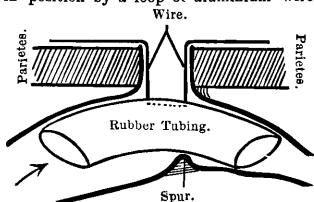


Fig. 2.

Diagram to show Banks's method of Reducing Spur and Dilating Contracted Bowel in Artificial Anus.

which is passed into but not through the wall of the tube, and is bent over the parietes by the side of the opening. This wire, if strong and fixed to the parietes by strapping, will prevent the tube both from being extruded and from being carried down the bowel. The tubing sets up some intestinal catarrh with secretion of mucus, and it may cause some pain. In most cases it can be borne with or without the assistance of opium. In a few days the spur will be reduced, and the lower gut will be dilated. A couple of days' rest may be given to the irritated intestine before operation.

The operation is begun as in that for fistula, by making incisions along the direction of the chief muscular fibres on each side of the opening down to the sub-peritoneal tissue. The length of the incisions will vary according to the thickness of the parietes, but will not be shorter than two inches on each side of the anus. The knife is carried round the gut adherent to the parietes, liberating it thoroughly. The peritoneum, with its areolar tissue, is separated from the overlying muscle all round over a circle of two inches radius or more. The bowel, with its adherent

parietal peritoneum, is then delivered through the peritoneum. All superfluous pieces of tissue are removed, and the gut is ready for suture.

Usually union is best made transversely. If there has been resection of gut, transverse suturing is essential. If there has been only incision of bowel, as in colostomy or enterostomy, suture may be longitudinal; but even here it is perhaps best done transversely. I have succeeded equally well by each method.

Sutures are carefully placed by the Lembert method from behind forwards. Particular care is given to the deep suturing. A good hold of the tissues is taken, and each stitch must bring about accurate apposition. A single or double row of sutures is placed over the deep row, and here also perfect closure, without undue compression, must be secured. Tension may be avoided by complete liberation of the bowel from surrounding adhesions, and by further stripping of parietal peritoneum. The gut is closed exactly as in enterorrhaphy by Lembert's method inside the peritoneum; only there being more available tissue for union a more extensive grip is taken by each suture.

The wound in the bowel is cleansed; and the whole is pushed inside the cavity. The parietal wound is closed as before. A drainage tube placed over the line of intestinal suture will guard against infiltration if there is leakage. In one case (after resection) where there was leakage (caused possibly by constant vomiting for many hours from the anæsthetic) the fistula spontaneously closed without much trouble.

In conclusion, I may add that the operation, safe and satisfactory as it is to the patient, is not a very easy one for the surgeon. The most important detail is liberation of the gut by detachment of the parietal peritoneum. If detachment is well begun at the distal ends of the incisions, and the plane of separation is followed up to the very margin of the fistula or anus, the operation is much simplified. In my first

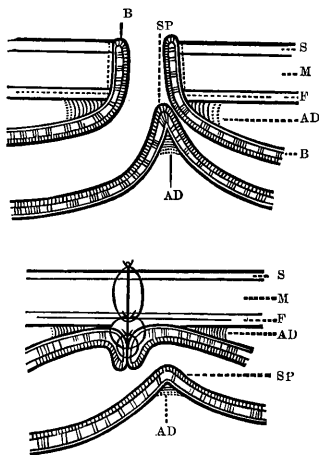


Fig. 3.

Diagrams to show method of Closure of Artificial Anus.

B. Bowel. Sp. Spur. S. Skin.
M. Muscular layer.
F. Sub-peritoneal fascia.

AD. Adhesions between bowel and peritoneum and between peritoneal surfaces of spur.

Broken line in upper diagram shows incisions around gut forming anus, and in sub-peritoneal areolar tissue. Lower diagram shows sutures in place, and operation finished.

operations I began the detachment from the edges of the fistula; this is not so easy, and may lead to opening of the cavity. Free detachment of parietal peritoneum, with accurate suturing of the bowel, are the most important elements of success.

In chronic cases of conjunctivitis, massage with castor oil, and in the follicular variety acetate of lead ointment, are recommended; and for trachoma, trituration with alum, sulphate of copper, or modified nitrate of silver stick. Dr. Kenneth Scott, who has had exceptional opportunities in Egypt of treating trachoma, formerly used a four per cent. solution of perchloride of mercury, with an eyedrop of a quarter per cent. At the Bristol meeting of the British Medical Association, he advocated, as an improvement, the use of cyanide of mercury, which is much less irritating and quite as efficacious. A four per cent. solution of the cyanide should be daily brushed on the everted lids, and a quarter per cent. solution used as an eye-drop three times a day. A slower cure is obtained by painting a one per cent. solution, and using as a drop one in 1,000. Warm weather seems distinctly favourable to a cure. Mr. Stephenson advocates a one per cent. solution of the perchloride, sulphate of copper crystal, and "expression." He considers trachoma to be a specific form of follicular conjunctivitis, due to the irritation of a specific organism. Many authorities still consider sulphate of copper crystal the best application.*—*The Bristol Medico-Chirurgical Journal*.

In the treatment of cancer a paper by Dr. W. B. Coley, of New York,† is of the greatest interest. For although the treatment here reported for inoperable malignant tumours seems especially efficacious in the class of sarcomata, yet there seems some hope that the results in carcinomata may

* *Brit. M. J.*, 1894, vol. ii., p. 589, contains a paper by Juler, and a discussion on the general subject of ophthalmia.

† *Med. Rec.*, vol. xlvii., 1895, p. 65.

improve. The treatment is based on the well-known fact that erysipelas attacking malignant growths has sometimes resulted in their cure. The method consists in injecting locally into the tumour, at intervals of from twenty-four to forty-eight hours, or longer, according to the reaction produced, the mixed toxins of the streptococcus of erysipelas and the bacillus prodigiosus, the cultures being sterilised at a low temperature, but not filtered. After cooling, some thymol is added as a preservative. Of this preparation the dose is one to eight minims. It is of rather uncertain strength; and Dr. Coley advises always beginning with the lowest dose, and gradually increasing it until the desired reaction is obtained, viz., a rise of temperature to 103° or 104° F. This reaction is only temporary, passing off in a few hours. The cases treated have all been either growths which had repeatedly recurred and were finally inoperable, or such as from the first were not fit for operation. In many cases the tumour disappeared by a process of necrosis and disintegration, but in some by absorption. One very remarkable case of the latter kind is quoted in which an enormous spindle-celled sarcoma, involving nearly the whole of one side of the chest, back and front, entirely disappeared in four months.

He had treated (by the combined toxins, filtered, as he originally prepared them) up to May, 1894, twenty-five cases of sarcoma, eight of carcinoma, and three of carcinoma or sarcoma; and since that date (by the combined toxins, unfiltered, as described above), thirteen sarcomata and eleven carcinomata. In the cases of sarcoma only, can Dr. Coley claim any cures; and of the combined thirty-eight cases, he thinks nine promise to be permanently successful: but, although none of the carcinomatous tumours disappeared, the injections seemed to have an undoubted retarding influence, in some cases to an extraordinary degree.

The method is, of course, still on its trial; but enough evidence has been adduced to

more than justify an extended and careful employment of it in these otherwise hopeless cases. The discomfort and risks seem very slight, while the issues at stake are enormous.—*The Bristol Medico-Chirurgical Journal*.

AN OPERATION FOR RELIEVING PHIMOSIS
WHEN COMPLICATING GONORRHOEA, WITHOUT
INFECTING THE WOUND.*

By R. M. Woodward, M.D.,

Passed Assistant Surgeon, U. S. Marine
Hospital Service; Clinical Lecturer on
Surgery, Medical Department, Western
Reserve University, Cleveland, Ohio.

All general practitioners see many cases of gonorrhœa, and among them is frequently one occurring in an individual the subject of more or less marked phimosis. The swelling of the glans penis and prepuce incident to gonorrhœa increases the degree of phimosis. The pain produced by an attempt to retract the prepuce for purposes of cleanliness induces the patient to defer this act longer and longer, until finally it becomes nearly or quite impossible. Gonorrhœal pus collects beneath the prepuce, especially back of the corona glandis. It cannot be removed with a gonorrhœal syringe.

The contact of the irritating pus soon causes balanitis and posthitis, with gonorrhœal ulcers, all of which complicate the original trouble, interfere with treatment, and make the patient miserable.

The usual treatment in such cases has been to slit up the back of the prepuce, and later on to circumcise, or to proceed to circumcision at once; but in either case the wound becomes infected, and an indolent ulcer the size of the entire incision results, which may last for weeks, and leaves an unsightly scar.

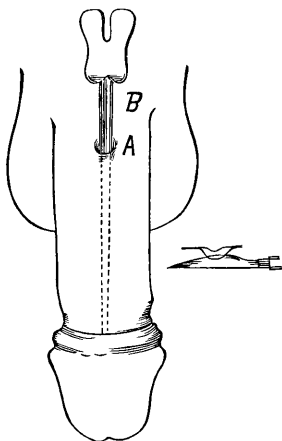
To relieve the constriction, and at the same time avoid infection of the wound, I adopted the following simple procedure, which, so far as I know, has not been suggested before:—

* Read, and the patient exhibited, before the Cleveland Medical Society, December 28, 1894.

1. Shave the pubes, penis and scrotum.
2. Thoroughly scrub the parts with a solution of bichloride of mercury, 1 to 2,000.
3. Compress the glans penis, forcing the blood out, and dexterously slip back the prepuce over the corona glandis, converting the phimosis into a paraphimosis.
4. Cleanse the glans and prepuce well with the same antiseptic solution, and have an assistant hold the glans wrapped in cotton wet with bichloride.
5. Place a rubber band about the penis at the level of B, near the base.
6. Inject a four-per-cent. solution of cocaine subcutaneously, entering the needle just back of A and passing it down to and under the constriction at C, slowly injecting the solution during withdrawal.
7. Pick up the skin at A with two forceps. and snip with scissors.
8. Withdraw the foreskin to its fullest extent, bringing the constriction (junction of mucous and cutaneous surfaces) about a quarter or half an inch back of the corona glandis.
9. Introduce subcutaneously a grooved director at A, and pass down beneath the constriction.
10. Upon the director pass a tenotome flatwise, until the constriction is reached, then turn the cutting edge up, and gently sever the constricting band *without cutting through the mucous membrane or skin*.
11. Withdraw the instruments, remove the rubber band, check the few drops of blood that appear, take one or two fine catgut stitches in the wound, and close it with cotton and collodion, to prevent the absorption of any poison that may afterward touch it.
12. Lay one thickness of iodoform gauze over the glans, again compress it, and draw down the prepuce to its former position.

The opening in the prepuce is appreciably enlarged at the time, and this increases during the first three days. To prevent

oedema of the penis, bandage the organ snugly, swing the scrotum up over the abdomen, and give an opium pill the first two or three nights to prevent priapism.



The patient is now able to retract the prepuce at will, and daily dressings can be applied to the irritated membranes. The soreness disappears in a few days.

When the gonorrhoeal discharge has entirely ceased, circumcision can be performed if considered advisable; but in the cases where I have performed this operation, the opening in the prepuce has been rendered so large that there was no possibility of a phimosis occurring with any subsequent attack of gonorrhoea, and circumcision was not indicated. The operation is equally applicable to phimosis complicating chancroids. If the chancroid should be in the dorsal median line beneath the prepuce, pass the grooved director and tenotome at one side.

The wound in the skin need only be large enough to admit the tip of a grooved director, and the resulting cicatrix is almost invisible. The tenotome should be well bellied and have a keen edge.

THE TREATMENT OF BLEEDING FROM THE NOSE.

(*New York Medical Journal*, November 17, 1894.)—The *Revue Internationale de Rhinologie, Otologie, et Laryngologie* for August 10, publishes an article by Dr. Baumgarten, of Budapest, in which he recommends the following methods in the treatment of epistaxis: A thorough examination of the inside of the nose must be made in order to discover where the bleeding comes from. Usually there are to be seen at the anterior part of the septum, rarely elsewhere, one or more small superficial vessels of a red color, or else little nodules, erosions, and varicose veins, or a small empty vessel looking blackish on a red background. Occasionally the hemorrhagic spot is covered with fresh blood-crusted, which must be softened and carefully raised in order to expose the appearances referred to. If there is nothing of a suspicious nature to be seen, the patient must be made to blow his nose several times. Another method is to apply a tampon of wet cotton to the septum, and press it more and more firmly against the place until the morbid spot bleeds. Sometimes this brings on at once a more abundant hemorrhage, which makes the continued application of the tampon necessary before the bleeding spot can be destroyed. For its destruction the author has used the galvanic cautery or chromic acid, sometimes both. He touches the spot with the cautery, which is very painful, and the wire loop cannot always be withdrawn while it is still red, so that the eschar is apt to be removed at the same time. Then the small wound bleeds feebly, and it should be cauterized with chromic acid, which, according to Dr. Bresgen, is an excellent hemostatic. When operating on children or on timid persons Dr. Baumgarten uses the chromic acid only, but the cauterizations must be repeated two or more times after the eschar has fallen or after a fresh hemorrhage. This treatment must be continued until a plainly visible

cicatrix is produced. The patient must be told not to scratch the eschar, to apply a little oil or grease to the spot, to keep quiet, to avoid handling his nose, and not to blow it too hard.

Sometimes sneezing occurs, and this may bring on a hemorrhage through the eschar. In this case the application must be renewed. A hemorrhage must always be arrested before cauterizing the spot from which it proceeds. After the source of the hemorrhage has been ascertained the spot is washed with warm water, the nostril is dilated, and as large a tampon as possible is inserted, against which the wing of the nostril is pressed with the finger. That generally suffices, as nearly all forms of epistaxis have their origin in the forepart of the nasal passages, but the patient must hold himself erect and remain quiet. After this pressure has been continued for a moment the tampon is slowly withdrawn in order to find the origin of the hemorrhage. A second tampon is then pressed against the spot. The epistaxis is thus often arrested. Afterwards the place may be cauterized with chromic acid. The author has often succeeded in covering the bloody points with a layer of chromic acid by pushing the tampon forward very gently; it cannot always be removed immediately, because the wound will bleed anew, and it must be left until the following day or longer if necessary. The author, however, has never had to repeat this for more than three days. He always uses cotton saturated with carbolic acid or some other aseptic cotton, but never iron perchloride, as that only cauterizes.

If the blood runs through the tampon or into the pharynx, the physician should use the same means as those employed in the more serious hemorrhages. After the part has been washed with warm water, a strip of iodoform gauze as wide as a finger should be pushed as far as the choana; then the entire nasal fossa should be packed with the same material. This may be done easily and without pain; it is better than Belloq's

method, and may be accomplished even with a contracted nostril. With regard to Belloq's method, Dr. Baumgarten thinks it is not sufficient and that it may produce accidents to the ear, etc. In one case, that of an old man who was the subject of advanced arterio-sclerosis, Belloq's tampon was inserted, and several tampons were added anteriorly. Two physicians had tried to stop the bleeding, but their efforts had been of no avail. The velum of the palate had been cut, and it was ulcerated and oedematous. The author, who was called in, immediately removed everything, and while the bleeding continued he applied strips of iodoform gauze, and two days afterwards the hemorrhage was arrested.

As a palliative method, or in cases where the anterior tampon is not efficacious, or where the patient is taking care of himself pending the physician's arrival, the author recommends the use of warm water, which is a better hæmostatic than cold water or ice water, or else lemon juice. A solution of iron perchloride is an excellent hæmostatic, he says, but it cauterizes the neighboring region and prevents the physician from distinguishing the diseased spot.

When the hemorrhage finally stops, and the bleeding points are found, they must be cauterized. There is no harm in cauterizing somewhat around the bleeding spot; on the contrary, the indications are to burn the entire vicinity. In cases of arterio-sclerosis the author has been obliged to cauterize the entire pituitary surface as far as the choana, as the iodoformed strips were removed one after another. These cauterizations should be repeated several times, and every suspected place covered anew with chromic acid. These tampons of iodoform gauze are not disagreeable to the patient, and they may be left for two days. Before removing them the nose should be washed with warm water, and the strips of gauze should be drawn away very gently in order to prevent the hemorrhage from breaking out again, and any

suspected places immediately cauterized, even at the risk of touching a healthy spot. The patient may take wine and iron, but should avoid coffee, tea, and effervescing drinks. All internal medicines are useless and harmful.

A CASE OF HORDEOLUM TERMINATING IN DEATH.

By Dr. Lesniowski.

("Gazeta Lekarska," No. 18.)

The case reported by the author relates to a man twenty years old who had had a sty on the lower lid of the right eye for several days, and who was suddenly seized with a severe chill, followed immediately by a marked œdema of the forehead. The condition of the patient continued to grow worse, and he entered the *Hôpital de l'Enfant-Jesus* during the service of Dr. Jawdyski, when quite an intense fever was found, with loss of consciousness; the lids of the right eye, the forehead, and the root of the nose were œdematous, and the œdema spread to the left half of the cranium. The eyeball and conjunctiva showed no signs of trouble, râles were heard in the lungs, and the general bad condition of the patient increased. At the lower border of the right lid a small scar was seen, near the internal angle of the eye. After shaving the hair about the œdematous epieranial region deep red streaks were found corresponding to the course of the veins, forming a network at the top of the head. In several parts of this network softening and fluctuation were found, while in others the streaks felt like hard cords. This was, then, a phlebitis of the frontal veins, which had arisen from the seat of the sty and had spread to the cerebral sinuses and produced pyæmia.

Incisions made along all the dilated veins of the forehead and cranium gave issue to a yellow, thick, non-fetid pus, and the suppuration was found to have invaded the surrounding tissue as well as the vessels.

All the wounds were carefully irrigated with a sublimate solution, and an antiseptic dressing applied, but the patient succumbed to the general weakness.

The autopsy confirmed the diagnosis made during life. Suppuration of the two cavernous sinuses was found, while the other cerebral sinuses contained liquid blood, a fact which showed the course of propagation of the pathological process to have been the ophthalmic vein, and not the veins of the cranium which communicate with the superficial sinuses. On removal of the eye the ophthalmic vein was seen to be completely filled with pus, and one of the suppurating veins could be traced to the root of the sty. The lungs contained several metastatic abscesses.

Pus obtained with proper precautions at the time of the operation produced cultures of yellow pyogenic staphylococcus. There was then no secondary infection. The same germ which is constantly found in abscesses in general, and especially in hordeolum, had caused the primary trouble (the hordeolum), and its consequence (phlebitis).

From the study of this case Dr. Lesniowski is led to affirm that any one with a trouble even so slight as a sty may be exposed to the most serious infectious complications.—*From Semaine Méd.*

A CASE OF OPERATION FOR CONGENITAL CATARACT.

By Dr. Van den Bergh.

("La Presse Méd. Belge," Oct. 28.)

The patient was a child four years of age with a complete congenital cataract with good projection. The mother also had a congenital cataract. Extraction was performed according to the simple linear method of Von Graefe, as there were calcareous deposits in the lens and a commencing absorption with rendered discision as well as aspiration improper. Indeed, according to the author, it is not always proper to rely upon aspiration in cataracts

of infancy. A hard nucleus is frequently found when it is not expected, and complications may follow, the least of which is the ill-success of the operation. The same is true of discision. Dr. Van der Bergh remembers an operation for discision attempted in his presence, and which could not be completed because of the hard condition of the lens. The needle dislocated the lens into the anterior chamber, and the child lost the eye. As the consistency of a cataract is never absolutely certain, it is better to have recourse to a process which offers security in all respects.

The operation was then performed according to the method of Von Graefe. A number of softened masses were extracted, and there remained in place a thick sac which it was impossible to tear. Dr. Van den Bergh then introduced a capsular forceps and drew out the whole capsular sac. The same manoeuvre was successfully accomplished on both sides, not an easy thing when the iris is left intact. After the operation the pupils were round and quite black. Recovery followed without complications, and the child enjoys good vision.—VALUDE.

HOW TO MAKE IODOFORM GAUZE.

New York, May 13, 1895.

To the Editor of the New York Medical Journal.

SIR: At the request of a number of gentlemen who have attended my clinics I desire to make public through you my formula for making a surgical dressing impregnated with iodoform. Fine-mesh gauze is steam-sterilized. It is then dried. After drying, the gauze is soaked in a twenty-per-cent. solution of iodoform in ether for ten minutes. It is taken out and the excess of ether wrung out with the hands. The gauze is now placed in a basin and covered with a towel. It is left for twelve hours in a warm room, after which time it will be found that the ether has entirely evaporated. The gauze is now of a

greenish-blue colour, presenting the characteristic starch-iodine reaction. It is unfit for use in this state, the iodine being too free.

The next step is to soak the gauze for twelve hours in a watery solution of bichloride of mercury, 1 to 4,000. This acts as a "fixing agent," and the beautiful golden colour of iodoform again appears. The gauze is now wrung as dry as the hands can make it and preserved in glass jars. Prepared in this way, the iodoform is not held in the gauze in mere mechanical association, but is in every bast cell of the fibre (cotton) of which the gauze is composed. The advantage of this is manifest: such a dressing cannot be poisonous, as the iodoform is not absorbed. The addition of discharges and blood to the gauze again turns it greenish-blue, showing that the iodine is again in a free state. So, when the dressings are saturated they are yet sterile. In cavity walls, there being no glycerin in the gauze, no serous exudation is induced. This material has been used by me for five years or more, and I may say it has largely influenced the results as well as after-treatment of my operations. I estimate that I make one dressing where three are made when other gauzes are used.

For instance, I leave a Mikulicz packing in the abdomen for two weeks, and when it is removed there is no pus, and no rise of temperature while it is in.

In one case where I did a successful hysterectomy for puerperal septicæmia the last piece of gauze was not removed before the tenth day. In curettage for gonorrhœal and septic endometritis the gauze stays in for five or more days.

In my method of operating for ventral hernia, the first dressing is made in from ten to fourteen days.

Ablations of the uterus are not dressed before the tenth or twelfth day.

This is the only dressing I have ever found which is powerfully antiseptic, is non-

irritant to the tissues, and remains sterile when soaked with discharges from an infected area.

It is perhaps well to mention that the dressing is prepared under an aseptic procedure as precise as that employed at an operation.

As to quantity that may be used: five yards long, one yard wide, in a puerperal uterus; sixteen yards long, four inches wide, in an obliteration of the pelvic cavity; nine yards long, four inches wide, after a sacral resection; and in no instance has there been the least evidence of iodoform intoxication.

So far as the chemistry of the procedure is concerned I have been told it is as follows: When the gauze is green after the ether has evaporated there is iodide of starch and there is free iodine; when the bichloride has been added there is bichloride in the starch and there is iodoform; when the bichloride is changed to calomel by blood, etc., the iodine again becomes free and the dressing is again greenish-blue. But I cannot say whether this is true so far as the chemistry is involved. Certainly marvelous results are obtained with it.—W. R. PRYOR, M.D.

WHAT CASES OF PHTHISIS ARE CURED BY
COLORADO CLIMATE? IS PERMANENT
RESIDENCE NECESSARY?

Regarding Colorado climate as a cure for tuberculosis, experience has given Waxham many fixed and positive opinions. He does not believe that this climate and altitude are suitable for all cases of consumption, but that a great many recover here who would otherwise have filled untimely graves has been so frequently demonstrated as to require no argument.

The cases that are especially unfavourably affected by this climate are those in the later stages. The dyspnoea is increased, the ability to take exercise diminished, and the heart's action increased. This, added to the disappointment and the absence

from friends and home comforts, renders life miserable and the unfavourable result certain and speedy. Colorado climate is worse than useless where a large area of lung tissue is involved in the tubercular process, where there are profuse night-sweats, rapid heart action, elevated temperature, with emaciation and prostration. Patients so affected are much better at home, but, if sent away, should be sent to a mild climate and a low altitude. He believes that fibroid cases with bronchitis and embarrassed heart action are unfavourable, but with proper care in regard to exercise, and with the aid of heart tonics, they will undoubtedly do quite as well here as anywhere, except in the later stages. A word of caution is necessary in relation to exercise. Frequently patients are advised to walk, to ride horseback, to climb the hills; in fact, to take all the out-door exercise possible and to take little or no medicine. It must be remembered that, to one even in good health, exercise at an altitude of from five thousand to seven thousand feet is much more exhausting than at the sea-level, until one has become acclimated or accustomed to it. To one in feeble health great and sometimes permanent injury is done by too great exercise on first coming to this altitude. They should be advised to rest and to take exercise gradually. Frequently digitalis is required in addition. Fresh, uncontaminated air is of the utmost importance, and those do better who can even sleep in tents, and yet too much care cannot be taken in regard to exercise, especially for the first few weeks.

He has not seen nervous cases aggravated by Denver climate, but it is probably true that very high altitudes, as at Leadville (ten thousand feet), Georgetown (nine thousand), and the like, are not at all suitable for nervous cases or those affected with mitral insufficiency or other diseases of the heart. He states that he should hardly feel justified in sending such cases to an altitude of over six thousand feet. He

does not believe that this climate in itself increases the tendency to fever, but has often seen fevers induced by injudicious exercise that would not otherwise have developed. The tendency to hemorrhage is not increased, but, on the contrary, is diminished, and we look upon the hemorrhagic cases as the most favourable if not too far advanced.

Cases of tuberculosis should not come to Colorado for six, eight, or ten months, but from three to five years. Permanent residence in Colorado is not absolutely necessary after this time, provided all symptoms have disappeared, but it is better and safer to do so. Relapsing cases are unfavorable, and hence a patient should not be allowed to return too soon. As a rule, it requires from one to two years for active cases to pass into the stage of "arrest." Cases complicated with diseases of the heart need not be debarred from going to Colorado, provided care is observed in regard to exercise, if heart tonics are taken until the patient has become acclimated, and especially if the lower altitudes of Colorado are selected.—*Colorado Climatologist*, December 15, 1894.

TREATMENT OF PUERPERAL INFECTION.

Bonnaire thus treats puerperal infection (*La Tribune Médicale*, July, 1894).

In all manipulations before, during, and after labour, scrupulously cleanse everything, from hands and instruments to bed-linen, that in any way may come in contact with the genitals of the patient.

Those who claim that the cause is always hetero-infection rely upon asepsis alone, but those who claim that the source of the microbes may be both hetero- and auto-infection rely upon antiseptics.

The author believes with others that auto-infection may be occasioned by the streptococcus, staphylococcus, gonococcus, or the colon bacillus, etc., and for that reason proposes antiseptics.

To avoid the entrance of the microbes, and their destruction when present after labour, a very feeble stream should be used in washing out the vagina, and the olive-tipped glass instrument used for the injections should be perforated only on the side.

Great care should be exercised that the canula contains no air, and from 3 to 4 quarts of a solution of sublimate (1 to 10,000) should be injected.

Carbolic acid is also a good antiseptic to use in these cases, in strength of at least two-per-cent. solutions.

Sulphate of copper is also a good drug, but possesses the same danger as the carbolic, in that they may both cause rapid poisoning when absorbed.

Bonnaire especially recommends the iodide and permanganate of potassium, iodoform, and phenosalyl. The following is an excellent way of using iodine:—

R. Iodide of potassium, $\frac{1}{2}$ dr.
Metallic iodine, m. xlv.
Water, fl. oz. iij.
Mix the whole in a quart of water.

Potassium permanganate is a good disinfectant, but less energetic than iodine.

Phenosalyl in solutions of one per cent. is more active than phenol at five per cent.

Iodoform increases diapedesis, and is an excellent antiseptic to living tissues.

As for boric acid, he considers it dangerous, not because it is toxic, but because it offers no resistance to microbes.

Finally, in a case of puerperal metritis, commence by washing the vagina with sublimate; then irrigate the uterus with permanganate, 1 to 1,000. If, in a few hours, the temperature does not commence to subside, then inject into the uterine cavity the solution of iodine.

If there are false membranes, or if the irrigation does not suffice to remove the source of infection, then cleanse by friction, or, finally, curette the uterine cavity.

When swabbing is resorted to, impregnate the substance used with zinc chloride, iodine, or carbolic, five to ten per cent.

After curetting, wipe out the uterine cavity with a solution of carbolyzed glycerin, ten per cent.; creosote and glycerin, one to three per cent., or chloride of zinc, ten per cent., and tampon the vagina with iodoform gauze, either dry or saturated with one of the foregoing solutions.

General Treatment.—There is usually a diarrhoea, very offensive in odour and with large stools. To remedy this, some form of intestinal antiseptic will be sufficient,—benzonaphtol, naphthol, salol, salicylate of bismuth.

Increase diuresis by a milk diet; excite the skin to increased action by frictions or by baths. In cases of high fever with delirium, cold baths will give good results.

To act directly upon the germs and their products in the blood, mercury is a great auxiliary. The best form is calomel; by its action upon the liver it increases the microbicidal power and also disinfects the intestines. Give the first day 7 grains at a dose and repeat four hours afterwards, followed the next day with small doses ($\frac{3}{4}$ grain) every two hours.

Alcohol and quinine sulphate may also be added to this list, supplemented by milk, bouillon, eggs, peptones, and coffee.

Also in the line of rendering the blood more resistant to microbic influence, the subcutaneous injection of the serum of Hayem, in two injections daily of ten fluid-drachms each, will often produce the greatest tonic influence. Below is appended the formula for the serum of Hayem:—

R Sodii chloridi, gr iiss.
Sodii sulph., gr. iiss.
Aqua, Oii.

THE DYSPEPSIA OF STRUMOUS CHILDREN.

Dr. W. Soltau Fenwick states (*Clin. Jour.*) that mild cases of strumous dyspepsia are very common and usually escape notice, but that the more severe forms immediately claim attention. Of 200 cases of disease in children during the past year in his service, 32 suffered from the disorder.

In the majority of the cases there is a strong family history of tuberculosis, and usually some of the brothers or sisters of the patient suffer from scrofula. The disease usually appears about the age of five years, and in addition to the general tuberculous aspect there is usually some local manifestation, such as chronic enlargement of the cervical glands, hypertrophy of the tonsils, or phlyctenular ulcers of the cornea. Anæmia is always a noticeable feature, while pain in the abdomen is the most constant and characteristic symptom. It comes on suddenly, lasting from a few minutes to several hours, the face being flushed with free perspiration, although at times great pallor is present. The pain is described as a gripping or twisting sensation in the region of the transverse colon, though occasionally the right iliac region or the hypogastrium is indicated as the chief site of suffering. Constipation, exhaustion from want of food, and excessive mental or physical fatigue are the principal factors which seem to excite an attack.

As a rule the appetite is poor and extremely capricious, and the patient exhibits an intense dislike to most forms of fat, especially that of mutton, beef, and pork. Bacon-fat, on the other hand, is often agreeable, and milk, butter, and cod-liver oil never give rise to any unpleasant symptoms. Occasionally dislike is expressed for the carbohydrates, and saccharine materials are found to occasion flatulence, acidity or nausea. Many of the patients also develop a special liking for certain articles which are usually regarded as the reverse of digestible or nourishing, vinegar and lemon enjoying an extreme degree of popularity. Thirst always constitutes a prominent symptom, and is chiefly complained of during the night or early morning.

Although the ordinary symptoms of gastric disease, such as nausea, acidity, and flatulence, are usually absent in these cases, it occasionally happens that a sudden change in the atmospheric condition or some

slight indiscretion in diet will induce an attack of subacute gastric catarrh. Under these circumstances the patient awakes in the morning with head-ache, and complains of nausea and a foul taste in the mouth. The appetite is in abeyance, but thirst is excessive. The face appears pale and puffy, and dark lines make their appearance beneath the eyes. The breath is sour and the dorsum of the tongue covered with a thick white fur, while the tip and edges are of a vivid red colour. The pulse is slightly quickened, and the temperature raised a degree or so above the normal. Nausea is a persistent symptom, and retching or vomiting follows every attempt to partake of food. As a rule diarrhœa complicates the gastric disorder, but occasionally constipation is observed. These catarrhal attacks last from two to five days and are apt to recur from time to time.

After the age of puberty the various symptoms of the complaint generally subside, but the patient may still be subject to occasional attacks of gastric catarrh. In some instances, however, the disease undergoes a kind of evolution, and the stomach, rather than the intestine, eventually becomes the chief seat of the disorder. Dr. Fenwick regards the affection as essentially a neurosis of the intestinal tract, associated with extreme difficulty of digestion and absorption of neutral fats, both conditions being dependent upon the strumous dyscrasia.

TREATMENT OF THE "SENILE HEART."

Dr. G. W. Balfour gives (*Bristol Med. Chirur. Jour.*) In every case careful removal of *lactentia*.

Precordial Anxiety.—Careful dieting; cardiac tonics; rest at first, afterwards regulated exercise.

Intermission and Irregularity.—Careful dieting; vascular stimulants, combined with cardiac tonics; sedatives, especially for women about their climacteric, occasionally hypnotics; antacids and anti-arthritis;

assafœtida (pil. galbani co.); moderate exercise.

Palpitation.—Antacids; stimulants; mustard over precordial region; hot foot-baths. In interval strengthen patient by open air exercise, good food and such tonics as may seem needful, especially iron.

Tremor Cordis.—Careful dieting most important; antacids; anti-arthritis; *pil. galbani co.*

Tachycardia.—Careful dieting; in recent cases following cardiac overstrain, belladonna, or atropine, must be pushed till pupils dilate. In cases of poisoning by tobacco or alcohol, tonic doses of digitalis useful. Cardiac tonics, especially digitalis and arsenic, continued for a long time in moderate doses, supplemented by hypnotics at bed-time, especially morphia. Digitalis most useful in vagus paralysis, morphia in affections of the sympathetic. Cholate of soda slows the pulse, but it destroys the blood corpuscles, and the benefit is thus a doubtful one. Antipyrine has been recommended theoretically. Faradization of the skin over the precordia, or of the vagus nerve; or the skin or vagus may be galvanized. Compression of the vagus. Forced inspiration holding the breath as long as possible. Ether sprayed along the cervical spine. A chloroform poultice over the precordial region.

Bradycardia.—In the hemi-systolic variety cardiac tonics, especially digitalis. In true bradycardia digitalis is also indispensable, to maintain the elastic tonicity of the heart, and to enable the heart to cope with the exceptionally high blood pressure prevalent during part of the systole.

Delirium Cordis.—Careful dieting, vascular stimulants, cardiac tonics, antacids, and anti-arthritis.

Angina pectoris.—During the paroxysm, nitro-glycerine, nitrite of amyl, chloroform and morphia. During the interval, most careful and abstemious diet, especially towards evening. Vascular stimulants in combination with cardiac tonics, especially

arsenic. Exercise is to be avoided and only undertaken when duly prepared for by the ingestion of some vascular stimulant.

SOME UNUSUAL EFFECTS OF QUININE ON
THE SKIN.

Schnech contributes to the *Journal of the American Medical Association*, August 4, 1894, some facts in regard to this subject which are of interest.

Perhaps the most common dermal effect of quinine, when administered internally, is a form of hives or urticaria, in which the surface is fairly covered with irregular-shaped, reddish-coloured blotches, varying in size from that of a dime to the palm of the hand. The skin is slightly elevated, has a hard, tense feel to the touch; there is usually intolerable itching and burning; sometimes the skin is so sensitive that even the slightest touch causes severe pain and feels as if a raw surface had been touched.

In other cases the eruption is in the form of a rash similar to that seen in scarlet fever. Often there is a uniform flush of the surface of the skin, as in an erythema. Quite frequently an herpetic eruption follows the administration of quinine, which may be located on the lips, ear, cheek, or prepuce. One of the writer's patients suffered from acute coryza on the administration of a 5-grain dose.

There is a rarer form in which a small circumscribed area is affected whenever quinine is administered. He has treated an old lady for years, in whom 10 grains of quinine, given during one-half a day, will cause larger reddish-purple blotches to appear on the ulnar margin of the left hand, and another, about the size of a half-dollar, on the upper portion of the left concha; the eruption is accompanied by a hot, tingling sensation, and disappears during the following twenty-four hours after the remedy has been given; the same train of symptoms invariably recurs when she takes quinine.

Another case is that of a carpenter, in whom a course of twenty grains of quinine, given in 4-grain doses two hours apart, invariably produces a similarly coloured condition of the skin on the back of the left thumb, between the first and second joints. The burning sensation is very severe; the epidermis is raised into a blister and afterwards shed.

A still more singular case is that of a young farmer, in whom 20 grains of quinine will cause the mucous membrane covering the glans penis to change to a dark-purple colour, accompanied by intense itching, followed by the shedding of the epithelial layer in the course of the following week.

Another instance is that of an intimate friend, in whom 4 grains of quinine will cause a most annoying itching of the glans penis in from thirty to sixty minutes after it has been taken. If taken at bed-time, the itching will continue until morning. The man is about fifty years old, and during the last eight or ten years of his life this effect has invariably followed the use of quinine, while previous to that time it was not noticed, although he has taken quinine frequently since early childhood. This last instance is of especial interest, as it indicates the length of time required from the ingestion of an ordinary dose of quinine until its physiological effects are produced.

BRIEF LOCAL ANÆSTHESIA,

says the *Practitioner*, can be produced by spraying with a mixture of half a drachm of menthol, five drachms of chloroform, and an ounce of ether. The anæsthesia lasts for about five minutes.

CHLORAL IN HÆMOPTYSIS.

In the *Berliner Klinische Wochenschrift*, Doctor Pal praises chloral hydrate very highly in the treatment of pulmonary hæmorrhages, when administered per rectum in doses of from fifteen to thirty grains. He declares its action is usually

manifested in from thirty to forty minutes, and that it is rarely necessary to repeat the dose; moreover, it sometimes acts as a prophylactic. A normal heart is, of course, essential.

STRYCHNIA IN UTERINE HÆMORRHAGE.

Recently very extensive claims have been made for strychnine as a specific against all forms of uterine hæmorrhage. In gestation where there has been a previous history of flooding, it is advised to administer the drug in one-sixtieth-grain doses three times daily for a period of from four to six weeks before expected labour. It is also declared to be of value where previous parturitions have been tardy owing to irregular and feeble uterine contractions.

BELLADONNA IN SKIN DISEASES.

Eliza Dunbar, M.D. (*Woman's Medical Journal*) speaks in high terms of the benefit she has derived from the internal administration of Belladonna in all itching skin diseases. She has employed it in pruritus and eczema. Daily doses of one drachm are usually enough. It may be combined with tr. ferri, and in this form is very helpful in pruritus pudendi. In some old and obstinate cases, not only was the itching relieved, but the cases did well and improved under the administration of the drug. Persons vary in their susceptibility to the drug, and this must be kept in mind. When the patient flushes and gets headache from small doses, he will derive no benefit. The author noted that in case of failure she had good results when the drug was obtained from another chemist, showing the need for care in selecting the remedy. When the case is not promptly benefited it is, as a rule, useless to persist in the treatment.

ICHTHYOL IN FOOT-BLISTERS.

Myrdarz (*Deut. Med. Woch.*, No. 12, 1894; *Monatshefte für Praktische Dermatol.*,

No. 10, 1894) states that the foot-blisters occasioned by badly fitting shoes, usually located on the heel, or on, between, or beneath the toes, or the sole of the foot, are best treated by ichthyol. Sometimes these blisters form superficial abrasions, sometimes ulcers.

In one branch of the Austrian army there were in twelve years three hundred and fifty thousand soldiers treated in the hospital for these lesions. The average length of treatment is sixteen days. Twenty-per-cent. ichthyol solution painted over the lesions was found most efficacious.

TOOTHACHE.

In toothache: Chloral, camphor, glycerin, carbolic acid, equal quantities, applied on a small piece of cotton after cleaning the cavity, will relieve the pain. (Cover with more cotton to fill the cavity.) I keep the mixture, ready made, under the name of "Toothache Drops," in my medicine case. If the patient has lost sleep I give a full dose of chloral by the mouth.

PITYRIASIS VERSICOLOR.

Cold cream, 40 grammes (1½ ounces), *unwashed precipitated sulphur*, 4 grammes (1 drachm); *iodide of sulphur*, 2 grammes (½ drachm); *red oxide of mercury*, 1 gramme (15½ grains). Rub in well three times daily, then dust with a powder made of *talc* and *starch*. (MONIN, *Mouvement Thér. et Méd.*, December 1, 1894.)

PSORIASIS PALMARIS.

Rectified spirits of wine, 5 drachms (20 grammes); *sulphuric ether*, 3 drachms (12 grammes); *mix*; add *gum mastic*, 25 grains (1.6 grammes); when dissolved, add *salicylic acid*, 1 drachm (4 grammes). An excellent varnish. Apply a cold-starch poultice for a few hours, to allay any irritation caused by its use. To wash the hands use (instead of soap) very hot water with *quilliaia-bark*, mixing the fluid extract with

a small quantity of coal-tar (*liq. carbonis detergens*). (H. S. PURDON, Belfast Skin Hospital, *Dublin Journal of Medical Science*, January, 1895.)

ICHTHYOL-ZINC PASTE AS A TREATMENT
FOR ECZEMA OF THE FEMALE
GENITALS.

In an article on eczema of the mucous membranes, Von Sehlen (*Monatshefte für Praktische Dermatologie*, July, 1894) says that the inside of the vaginal sheath is especially subject to eczema, which continues outward to the labia, causing excessive itching. For the relief of this condition he proposes the following:—

Ichthyol ammon., $1\frac{1}{2}$ to 2 parts.
Amyli tritici.
Zinc flor. of each, 12 parts.
Vaseline, 25 parts.
M. et fiat pasta.
Sig.—Zinc-ichthyol paste.

Also calomel ointment of a high per cent. will often be useful in preventing the intense itching.

ICHTHYOL IN FISSURES OF THE ANUS.

Van Der Willigen warmly commends ichthyol in the treatment of fissures of the anus (*Journ. de Méd.*, No. 32, 1894; *Monatshefte für Praktische Dermatol.*, No. 10, 1894.) The pure drug is introduced into the anus by a brush. The contraction of the sphincter forces this into all the folds of the mucous membranes. Little pain is excited. Treatment should be repeated daily. The patient is given liquid diet and occasionally castor oil. The first patient, who had previously been treated by every means short of operation, was cured in eight days, the other three in two or three weeks. One had already been subjected to operation without benefit. There was no recurrence.

THIERSCH'S SKIN GRAFTING.

Thiersch's method consists of removing the granulations by a sharp curet. As soon as bleeding has been stopped by pro-

TECTIVE compresses, broad strips of the upper layers of the skin, removed by a razor with a rapid to-and-fro movement, from a portion of the arm or leg free from fat, are applied so as to completely cover the raw granulating surface. The field of operation is made aseptic and constantly bathed in a salt solution 6:1000. Protective strips and compresses moistened with the salt solution are then applied and an antiseptic dressing completes the operation.

REMEDY FOR INSECT STINGS.

A paint for the stings of insects, in which ammonia is kept in close and prolonged contact with the affected part, is prescribed as follows:—

R. Aq. ammoniæ, m. cl.
Collodion, gr. l.
Acid salicylici, gr. v.

A few drops to be applied to each bite or sting.

—*Medical Chronicle*, September, 1894.

CHRONIC ECZEMA OF THE FACE.

A prescription emanating from Hebra is:—

R Acidi salicylici	...	...	...	...	5
Ichthyol	...	...	...	...	10
Glycerini	...	...	...	...	10
Sp. menth. pip.	...	...	...	...	20
Sp. lavand.	...	...	...	...	20
Sp. vini rect.	...	...	...	...	60

M. Sig. Apply with a brush several times a day.—Dr. M. REGENSBURGER in *Pacific Medical Journal*.

TO SUMMARIZE BRIEFLY THE TREATMENT OF
FURUNCULOSIS OF THE EXTERNAL
AUDITORY CANAL.

1. As antiphlogistic measures, use the leech or blister in front of the tragus, and hot antiseptic irrigation when indicated. Avoid the use of poultices.

2. As local applications, cleanse the canal with alcohol and insert an ample tampon of cotton-wool saturated with camphor-phenol, renewing this every twenty-four hours, or

oftener if required. This is at once antiseptic and analgesic.

3. As constitutional remedies, give tonics and alteratives, with the especial recommendation of arsenic in the form of Fowler's solution. This should be administered in increasing doses until its physiologic action is obtained.

4. As an operative procedure, make a free incision through the boil and divide the periosteum down to the bone. This will prove necessary in well-advanced and chronic cases, especially when pus has already formed.

NEW PHENIC PREPARATIONS.

Dr. Galezowski recommends phenate of mercury in diseases of the cornea, especially in herpetic phlyctenular keratitis. This preparation is an advantageous substitute for yellow ointment, which is at times irritating.

As a wash or instillation, the following solutions:—

Distilled water, 100 grammes.

Phenate of mercury, 0 gr. 010 milligr. to 0 gr. 047 milligr.

As an ointment:—

Lanoline, 10 grammes.

Phenate of mercury, 0 gr. 05 centigr. to 0 gr. 10 centigr.

The author recommends the avoidance of cocaine in herpes of the cornea, inasmuch as this is an anæsthetic disease. The above preparations should not be used until steam douches or mydriatics have reduced the congestion; they should, however, be discontinued if they are not well borne.

VOMITING OF PREGNANCY.

A writer in the *Lancet* says, "I have not failed once for many years, by a single vesication over the fourth and fifth dorsal vertebrae, to put an end at once to the sickness of pregnancy for the whole remaining period of gestation, no matter at what stage I was consulted. The neuralgic toothache and pruritus pudendi of the puerperal con-

dition yielded as readily, and to one application."—*Medical and Surgical Journal*.

CHLOASMA OF PREGNANCY.

Dr. Hare recommends (*Coll. and Clin. Rec.*) the following:—

R Zinci oxidi, gr. vj.
Hydrarg. ammon, gr. ij.
Ol. theobrom, gr. v.
Oi. rici, m. v.
Ess. ros., gtt. xx.

M. Sig: Apply to the face night and morning.

ABSOLUTE BLINDNESS CAUSED BY A VERMIFUGE.

Dr. Grosz.—A man twenty-nine years old had somewhat weak vision in the left eye, but perfect vision in the right. He was suffering from his stomach, and went to a pharmacist, who gave him a vermifuge, consisting of capsules of etherial extract of male fern and extract of pomegranate; each capsule contained about 0.25 gramme of this combined medication. He took 32 of these capsules—that is, about 8 grammes of the medication—after previously taking castor oil.

In the evening he had syncope. The next day he had severe diarrhœa, and two days later he was blind in both eyes.

On examination there was complete mydriasis, and the pupils did not react at all to light. At first the fundus of each eye was normal, but little by little both lost their colour and become atrophic.

The author thinks that the noxious influence here was the extract of fern, which is toxic in doses of 4 to 5 grammes; perhaps, also, the castor oil previously taken reinforced the toxic action.

BIRTH.

At Ryde, Isle of Wight, on July 8th, the wife of Herbert Parry, M.R.C.S., of C. I. Mission, of a daughter.

MARRIAGES.

At Terre Haute, Indiana, U. S. A., July 30th, 1895, Dr. W. H. Curtiss, M. E. Mission, Peking, to Miss Lulu M. Hale, of

Terre Haute, by Rev. R. V. Hunter and Rev. Geo. L. Curtiss, D.D.

At Newchwang, on the 22nd of Aug., 1895, by the Rev. John MacIntyre, assisted by the Rev. George Douglas, M.A., and afterwards at the British Consulate, D. Craigie Gray, M.B., C.M. (Glasgow), to Janie, youngest daughter of the late John Sinclair, Edinburgh.

DEATH.

On Aug. 5th, at Chefoo, of cholera, Walter Duncan, the beloved little son of Dr. and Mrs. McFarlane, of Chi-chow, London Mission, aged 1 year and 9 months.

ARRIVALS.

At Shanghai, Sept. 10th, Dr. Worth and wife, of Presbyterian Mission, South.

At Shanghai, Sept. 12th, Dr. and Mrs. W. H. Curtiss and two children (returning), for Meth. Episcopal Mission, Peking.

DEPARTURES.

From Shanghai, July 27th, Dr. D. W. Stephenson, wife and 3 children, of Canadian Meth. Mission, Cheng-t'u, for Canada.

From Shanghai, Sept. 28th, per S. S. *Natal*, for England, Dr. and Mrs. Gillison, of the L. M. S., Hankow.

Official Notice.

The following gentleman has been duly elected a member of the Association:—James Henry Bennett, M.R.C.S., L.R.C.P., of the London Mission, Tientsin.

An opportunity having presented itself of securing part of the pathological specimens of the late Dr. Jamieson, of Shanghai, they have been purchased, on behalf of the Association, for the sum of Tls. 50. An effort will be made to secure the rest of the collection. As the Association only appropriates \$50 a year for the expenses of the museum, subscriptions are asked towards defraying this special charge: they may be forwarded to the Rev. G. F. Fitch, Presbyterian Mission Press, Shanghai, and will be acknowledged in the Journal. Further information will be given in our next number.

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Original Communications.

[No paper published or to be published in any other medical journal will be accepted for this department. All papers must be in the hands of the Editor on the first day of the month preceding that in which they are expected to appear. The editor cannot undertake to return manuscripts which are sent to him. A complimentary edition of a dozen reprints of his article will be furnished each contributor. Any number of reprints may be had at reasonable rates if a *written* order for the same accompany the paper.]

RED CROSS WORK IN TIENTSIN.

By B. C. ATTERBURY.

An account was given in a former number of the Journal of the formation of an "Independent Red Cross Society" at this point and of its expedition to Fort Arthur.

With the cessation of hostilities the work of the Association is drawing to a close, and a Report is now presented of what has been done during the past few months.

As will be seen this general Report is made up of Individual Reports contributed by those most actively engaged in caring for the wounded soldiers. Dr. Kin, although not definitely connected with the organization, has been asked to contribute his experiences, as most of his patients at the front finally passed through the Tientsin hospitals. Two members of the Society were stationed at *Shan-hai-kuan* for some days to receive the wounded as they arrived from Dr. Kin's hospital, and after making them as comfortable as possible placed them on board the cars to be carried to Tientsin. In this connexion the great kindness of F. J. Bourne, of the I. C. Railways, must be mentioned. It was through his hospitality and assistance that we were able to do much more at that place than otherwise would have been possible.

A good word must also be said for the Chinese soldier. In fact on closer acquaintance he does not appear as black as he is often painted. Robbed of his pay, and forced to steal, he is without doubt an object of terror to the unprotected country people. Treated, however, as a human being there is but little trouble in controlling him.

The patience and endurance of these men is amazing. They arrived in an exhausted condition at *Shan-hai-kuan* after a ride of six days in springless

carts over rough roads, during which time their wounds, often severe, had not received any attention ; yet I heard no complaints. In fact after having had a change of dressings and a bowl of rice they became very cheerful ; their good nature even showing itself at times in expressions of gratitude to the foreigner for his kind attentions.

Another point worthy of notice is the value of the Red Cross Society in stirring up the Chinese officials to something like a realization of what they themselves owe to their own soldiers. The idea of a number of foreigners contributing time and money in such efforts was novel to them. From very shame, and perhaps from higher motives, several of the most influential took a lively interest in the work and helped in many ways. Nor have the good influences yet stopped, as more than one general has asked for foreign trained doctors to be stationed in the camps under his command, promising to such money sufficient for all expenses.

In looking after these wounded valuable lessons have been taught the surgeons in charge.

Nature has shown her power to heal in many striking ways. Given free drainage and the removal of all causes for irritation, such as splinters of bone, many cases seemingly hopeless of cure, without a severe operation, recovered as by magic. Two classes of wounds have been noticed. The one made by the bullet encased with a steel jacket, of small size, and going at great velocity. It makes a clean path ; the point of entrance and exit being about the same in size. In some cases so slight is its effect on the wounded man that he continues in the ranks, unmindful of his injury, till weakened by hemorrhage he falls to the ground. The leaden bullet, larger in size and with its end flattened by contact with a bone, tears through the tissues with a much more terrible effect. Thus, as has been pointed out, the demoralizing effect of a sudden volley on the advancing line of the enemy may be lost by the use of these new arms, a point worthy of consideration, especially when fighting with savages, whose courage rapidly disappears at the sight of their comrades falling around them.

As the reports given below are so full there is nothing more to be added, excepting that it is pleasant to think in connexion with this whole work that many of the "braves" carry to their homes some knowledge of Christianity which they can think about themselves and speak of to their friends.

As all the Reports are not yet in, the exact number of wounded treated in Tientsin cannot at this moment be given. It will not vary much from 1,400, distributed among the following hospitals, all of which were kindly placed at the Red Cross Society's disposal :—

Methodist Hospital for Women, under charge of Dr. Benn.

Hospital for Women, under charge of Dr. King.

London Mission Hospital, charge of Dr. Smith.

R. C. Hospital, Dr. Frazer visiting surgeon.

Viceroy's Hospital, charge of Dr. Lin.

The above have been asked to contribute something about their work to the Journal, and it is hoped will fully respond.

REPORT OF DOCTOR KIN OF THE VICEROY'S HOSPITAL, TIENTSIN.

I was called to the front to look after the wounded soldiers after the battle of Ping-yang. It was in consequence of numerous telegrams sent by H. E. Yuan, formerly Chinese Resident at Seoul, to H. E. Li Hung-chang, then the commander-in-chief of the whole north China forces. He begged the Viceroy most earnestly to send a medical officer to open a field hospital at Hsing-ming-t'ing, a large town S. W. of Moukden.

Upon my arrival at that place I found over four hundred wounded men ; most of them came from Ping-yang, after having traveled eight or nine hundred *li*. Hungry and cold they were in a miserable condition. Several native doctors were looking after them ; their only remedy being a plaster, which they asserted would extract the bullet and prevent all evil consequences. At that dangerous time but few were willing to expose their lives, and my staff were chiefly inexperienced men. The supply also of drugs and dressings allowed me by the authorities was also insufficient. Had the army possessed a proper medical corps most of the wounded might have quickly been cured and restored to their duties. As it was the plaster placed over the wounds did great harm, especially as no care was taken to cleanse the parts before they were applied.

The injured soldiers were quartered in the various inns of the town, living in dirt and clothed in rags.

I found that the majority were wounded in the extremities ; the wounds being clean cut and easy to heal. On the first day we extracted over forty bullets, which had been lying in the wounds for over a month.

With the exception of the opium smokers all did well.

After the fall of Hai-ch'êng I was ordered by the authorities to remove my head-quarters to Kiu-chou, where I remained till the end of the war. To this point stragglers continually made their way ; all in a truly wretched condition, being left to shift for themselves while their generals drew their pay for their own benefit.

The battles of Niu-chuang and T'ien-chuang-t'ai brought to our hospital over nine hundred wounded. I fitted up all the houses I could secure to accommodate these poor fellows. Dr. Brander most kindly allowed me the

use of his hospital property and thoughtfully asked his Consul at Niu-chuang to notify the Commander-in-chief of the Japanese Army as to the position of my quarters, so that in case of an advance in Kin-chou I might receive as much protection as possible. The sudden rush of wounded kept us very busy. They came in carts, mostly in a starving state and but poorly clothed. H. E. Yuan Shih-kai allowed me a grant of five taels to buy clothes for each man, together with bedding. Full allowance was also made for their daily food.

Soon my proper dressings gave out, and the stock so kindly sent by Mrs. Andersen, prime mover of the Red Cross Society of Shanghai, did not reach Kin-chou till near the close of my work. Hence I had to resort to native supplies. Sesamum oil, carefully strained and purified, made a good dressing, especially in combination with carbolic oil. Native jute also answered admirably for oakum. The want of experienced assistants could not so easily be supplied, hence at times our work was somewhat after the rough and ready style.

When it was evident that peace was to be declared I requested Dr. Irwin to arrange for the reception of such of my patients as were not fully cured at the hospitals at Tientsin. They were sent by carts to Shan-hai-kuan, when the wounds were redressed by Dr. Atterbury and other members of the Red Cross Society, and then placed on board the rail-road.

In spite of all the drawbacks with which I had to contend we only had nine deaths.

Many of the men were very superstitious and great believers in a necromancer's power to cure their wounds without dressing them.

The commander-in-chief of the army sent to the wounded one of these men of high repute. A Hunan general, whose humerus was splintered by a ball, thinking my method of cure—picking out splinters of bone and daily washing the wound—too slow, sent for the quack. He gave for several days to the general a mixture consisting of the ash of a piece of red paper, on which was written some prayers, some drugs soaked in wine, but neglected the wound. In four days blood poisoning set in, and the patient quickly died. This is only one of many instances in which ignorance and superstition cost a man's life.

The wounds of the last lot of soldiers who came into the hospital were made by lead bullets, and hence far more ugly than those caused by the smaller bullets encased in a steel jacket. These latter make a clean wound; the point of entrance and exit having about the same appearance. May China soon learn the value of skilled medical service for her armies and be willing to supply what now is so sadly lacking !

THE ISABELLA FISHER HOSPITAL.

In common with the other hospitals of Tientsin the Isabella Fisher Hospital, of the Woman's Foreign Missionary Society of the M. E. Church, opened its doors to the wounded soldiers, and, notwithstanding the bad name the Chinese soldiers have borne, no one could ask for more obedient and respectful patients than they proved to be. Nearly all were from the south, many from Ho-nan; the terrible Hunanese soldier was as docile and as grateful a patient as could be found.

Most of the soldiers were gratifying patients also, because they responded so quickly to treatment. Coming to us with wounds undressed for weeks, filthy and septic to the last degree, the transformation wrought by cleanliness and daily dressing was comforting.

Out of one hundred and twenty-four patients we* had but one death, and that not from the severity of the wound but from exhaustion. He was an old opium-smoker, and had so little vitality that he succumbed where others, far more seriously wounded, rapidly recovered. Let me say here that we found a marked difference between the opium consumer and those free from the habit. Where the one made a good recovery the other lingered and lingered; the whole process of repair being exceedingly feeble.

The possibilities of conservative treatment, in contrast with the radical surgical treatment usually employed, as shown in cases of denuded and necrosed bone, greatly interested us.

Two feet, which were in such a state at the first dressing that we thought complete amputation was probably the only remedy for one and partial amputation for the other, will serve as illustrations.

In the first case the ball entered just to the left of the outer malleolus of the right ankle and came out on the dorsum of the foot, between the third and fourth metatarsal bones. The probe revealed crushed and denuded bone nearly the whole length of the septic wound, and the whole foot was badly swollen and discoloured. On March thirty-first we commenced thorough daily irrigation and drainage, fomentations and thick wrappings of antiseptic lint. From time to time pieces of bone came out, but with the exception of small counter-openings for drainage there was no surgical interference, and on May twenty-third the man was dismissed with a stiff but very useful foot.

The second case was a perforating wound through the arch of the right foot; the ball passing from right to left shattering the tarsal bones as it went. This foot, like the other, was swollen, purple and discharging foul

* The "we" in this article includes Dr. Edna Terry of M. E. Woman's Foreign Missionary Society and Dr. Philip Leach of the U. S. gun-boat *Monocacy*, who did as much of the work as I.

smelling pus. At first it was a question whether or not enough healthy skin for a flap could be obtained: if not, the sacrificing of the foot seemed inevitable. Under treatment improvement was rapid, and we concluded an operation might not become necessary. Then signs of inflammation would appear, pus sacs form and counter openings have to be made, and we would conclude the dead bone must be taken out. The man was loth to part with his bones, even the broken dead ones, and so we waited, with the result that he departed, the same day the other one did, with a whole foot, which will probably give him some trouble in the future by bits of bone working out, but which is a surprisingly good result. To be sure these cases took time—which is nothing to a Chinaman—and patience—of which he has a large share—and left stiff, bad-looking feet, instead of the neat result of surgical operations, but it saved the men their precious bones and showed what nature will do without the surgeon's knife.

The recuperative powers of the men seemed extraordinary to me. I often wondered how European soldiers would have come out under similar circumstances, as I saw a man with pierced pleural cavity, and a broken rib, recover with no complications; another in whom a ball had passed from the groin through the ilium, and who had a foul wound of twenty-one days' standing without dressing, recover rapidly. The result of one of Dr. Leach's operations was a surprise along the same line. The ball had passed in an oblique direction across the toes of the left foot, taking a piece out of the third toe, splitting the second and passing under the big toe, carrying away a part of the bone and the side and under part of the toe. Dr. Leach took off the injured top of the third toe and removed the bone at the phalangeal metatarsal articulation, retaining the under half of the toe. The second toe being already split he removed the broken bone, retaining both the upper and lower flap. He then removed the injured bone from the end of the big toe, and stitched across the top and side, bringing the flesh down over the bone: then stitching the upper half of the second to the great toe to fill in the side cavity he turned the two under flaps up over and stitched them fast on top. I laughed at him, saying those three narrow flaps had not enough blood supply to keep them alive, and dubbed it "Dr. Leach's Crazy Quilt Operation." He said he thought himself the healing was doubtful, but it was worth trying. *Not a bit of sloughing occurred.* All healed beautifully, and the man went away happy, carrying with him, as a trophy of the war, a piece of patch work, which must prove a curiosity to his countrymen, consummate patchers as they are.

One of the most interesting cases we treated was a man from Shantung, who was wounded at Tien-chuang-t'ai. The ball entered just above the lower edge of the sub-maxillary bone, on the left side, so close to the facial artery, as it comes up over the bone, that its escape was marvellous, and came out on the opposite side slightly nearer the point of the chin, carrying away

all the front teeth and sublingual structures. The site of exit had healed, and the cavity under the tongue was full of pus and broken bone. On April seventeenth I made an incision from the site of entrance, obliquely to corner of mouth, thus opening up the field of operation, and found complete fracture of the bone, both at entrance and exit, and the section between shattered into many small fragments. On the left side the bone had fractured obliquely, undermining two teeth, leaving them intact with their nerve and blood supply torn away and roots broken off. On the right the fracture was perpendicular. I removed all the bone between the fractures, placed a small drainage tube in the cavity with one extremity protruding from the site of entrance, sewed up the incision and packed the cavity with antiseptic gauze. The incision healed by first intention. April twenty-ninth the drainage tube was removed, and May sixth he departed in such good shape that though I reported him as severely wounded, and thus entitled to twenty taels, they said he was not badly hurt; he had his arms and legs, and could eat and so they only gave him ten taels. We called this man "The Philosopher," because he took everything—even the anæsthetic—in the most philosophical manner. He arrived after dark, and seeing what a condition his mouth was in we brought the spirit lamp and beef extract and long nosed feeding cup, giving orders for liquid food to be prepared especially for him. The next day the attendant returned the feeding cup, saying it was not needed, as the man was able to eat himself full; he had just eaten six bowls. Curious to see how it was done I watched him eat. Turning the bed-tick back from the edge of his wooden bed he placed his bowls of food in a row upon it. Kneeling so as to bring his mouth on a plane with them he then took a bowl, got its edge in his mouth above his tongue, tipped his head back, and the contents disappeared. Just how I could not make out, though giving the closest attention.

After the tube and packing had been removed from his mouth it was necessary to keep the cavity clean from food, and I used an irrigator. One day he signified his ability to attend to it himself, and taking some water in his mouth he set his head at a certain angle, gave a sudden north-east-all-round jerk of the head, and lo! the thing was done as well as I could have done it with the irrigator.

While with us the men listened very respectfully to instruction in the Christian religion. Those who could read seemed glad to receive Christian books, and carried them home to read to their friends. When we remember how wide and distant is the territory represented by them we are cheered with the hope that through their stay with us the Gospel of love may be carried to many places.

RACHEL BENN, M.D.

TIENTSIN INDEPENDENT RED CROSS SOCIETY.

LONDON MISSION HOSPITAL REPORT.

In all 190 soldiers, from the seat of war, came into our hospital; these included 13 attendants; 45 of their number were discharged after a couple of days' rest, they were either foot-sore, suffering from minor ailments, or malingerers. One stalwart soldier, in perfect health, had himself carried to hospital in a basket; he was forthwith turned out, much to his discomfiture.

Condition of the Wounded on Arrival.

Most of the men had been under the care of Dr. Kin at Kin-chou; there was abundant evidence and testimony as to the valuable service rendered by him; it is quite certain that by his brave efforts many a life had been saved. Including the railway journey it took the wounded seven days to come from Chin-chou, and this interval of time, during which they were not dressed, told heavily on some of the severer cases; their wounds were in a putrid condition. The last arrivals had been attended to at Shan-hai-kuan by members of our Red Cross Society; this also was a distinct benefit. One cannot but see the tremendous advantage of a regular series of intermediate Red Cross Stations between the field of battle and the hospital.

History.

The wounded came from the engagements at P'ing-yang, Hu-san, Chü-lien-chêng, Sa-hê-tzü, Chi-li-kou-tzü, Kin-chou, Ta-lien-wan, Port Arthur, Ta-p'ing-san and T'ien-tsoang-tai, especially from the latter five.

The accounts given are very varied; sometimes the Japanese were three *li* distant, but oftener only one *li* or half a *li*, and frequently it was a hand to hand engagement. With few exceptions they stated that they had been hit by rifle bullets; one or two were struck by pieces of exploded shell; a few had received sabre cuts; two men came in *minus* their queues.

The sufferings from the intense cold must have been great, for there were a number of severe frost-bites; two men had lost both feet in this way.

Situation of the Wounds.

The larger proportion were wounded in the arm, two were shot through the shoulder joint, several in the scapular region, one man had his lower jaw fractured, some had received scalp wounds. Three were wounded in the thoracic region, and of these the bullet in one case traversed the lung from back to front and was removed from below the pectoralis muscle. Three men were wounded in the lumbar region, but in neither was there any dangerous

injury; in one of these the bullet entered on one side just above the crest of the ileum and passed out on the opposite side at the 11th interspace in the posterior axillary line; strange to say, in this case, none of the internal organs were injured. The small proportion of wounds in the lower extremity (and most of these were flesh wounds) points rather to the fact that those who could not walk were left behind. One man had a compound fracture of the tibia, and two men had been shot through the ankle joint.

Character of the Wounds.

a. Wounds of entrance and of exit.

To illustrate the relative sizes of these a few examples may be quoted.

Case I. Wounded in the engagement at Ta-p'ing-san. The Japanese were not many feet distant when the patient was struck by a rifle bullet in his right arm, at about the junction of the middle and upper thirds; the bullet entered anteriorly, caused a complete compound fracture of the humerus with longitudinal splintering, and then passed out posteriorly.



Wound of entrance.



Wound of exit.

Case II. Wounded at Ta-p'ing-san. The Japanese were half a *li* distant. The patient was struck by a rifle bullet, which traversed his right arm from before backwards at about the junction of the middle and upper thirds. It caused a complete compound fracture of the humerus with longitudinal splintering. A small piece of the bullet got chipped off, and was found in the wound; it seemed to be a piece of a leaden bullet $\frac{7}{16}$ inch calibre. Muratta.



Wound of entrance.



Wound of exit.

Case III. This man was wounded at T'ien-tsoang-t'ai. He states that the Japanese were half a *li* distant when the bullet hit him; it traversed the thigh from behind forwards, passing through the muscles in the upper third of the posterior and internal femoral region and injuring the adductor longus muscle in its course.



Wound of entrance.



Wound of exit.

Case IV. This case too is from T'ien-tsoang-t'ai. While helping a wounded man he was hit by a rifle bullet. The Japanese were about one *li* away. The bullet entered the upper part of his left thigh on the posterior femoral region and passed out in front; it re-entered his right thigh at the upper part of the internal femoral region, and was found lying in a bag of pus, below the rectus femoris, about its middle.



(1)



(2)



(3)

(1.) Wound of entrance. Left thigh.

(2.) „ „ exit „

(3.) „ „ entrance. Right thigh.

The bullet was $\frac{7}{16}$ inch calibre. See Picture, Fig. 2.

In comparing these four cases one notices that in No. 1, where the shot was fired at a few paces distant, the wound of entrance is larger than the wound of exit; in No. 2, where the place of fracture is practically the same, but where the shot was fired at a distance of half a *li*, the wound of entrance is smaller than the wound of exit.

In No. 3 also the wound of entrance is the smallest.

In No. 4 too the wound of entrance was smaller than the wound of exit, but when the bullet, with diminished speed, entered the right thigh it seems to have caused a wound of entrance at least four times as large as the wound of entrance in the left thigh.

FOUR BULLETS EXTRACTED FROM CASES
REFERRED TO IN THIS PAPER.



Treatment.

Thirty-nine operations were performed ; many of these under chloroform and the others with cocaine. There were two amputations of the leg, one of the arm, three of the fingers and one of the toes.

Five entire bullets were removed ; also some hollowed out, thin fragments of bullets, which had evidently been chipped off the pointed end of the bullet as it came in contact with the bone.

A bullet removed from below the under jaw may be mentioned. See Fig. 1. Along one side it has been split up into a number of jagged layers between which are wedged pieces of bone ; this was evidently caused by contact with the lower jaw, which it had fractured.

One flattened out piece of lead was found wedged in between the re-united fragments of a broken humerus ; here the external wound was healed, and this piece of lead seemed to give little, if any trouble. All the bullets were of the old Muratta pattern large calibre.

As to dressings. In most cases ship's oakum was used ; the more particular were dressed with alembroth wool. For a dusting powder we applied iodoform 1 pt. to boracic acid 3 pts. Then for bandages we used the neatly and tightly rolled calico bandages with which the ladies kept us supplied.

The wounds were freely irrigated with corrosive sublimate solution 1 to 2000 of water. In many instances a solution of sulphate of copper, 15 grs. to 1 ounce of water, proved most useful.

One has been impressed with the importance of not being in too great a hurry to remove all loose bone. It has been amazing to notice how apparently hopelessly loose pieces of bone have healed in again. Specially was this noticed in a case of compound fracture of the humerus with longitudinal splitting. In this connexion may be mentioned the case of a man with compound fracture of the tibia. When he came to us, some six weeks after the battle, there was a large open granulating wound with two ends of bare bone protruding. Amputation seemed the only possible treatment, but the patient absolutely refused to have his limb operated on in any way whatsoever. The bone, although bared of its periosteum, had a pinkish appearance, and was seemingly well supplied with blood from the nutrient artery, or from anastomoses with the healthy periosteal vessels. With the exception of removing a small sequestrum nothing was done, but careful washing and dressing. Gradually a strong case of new bone was formed, and he left us with a fairly useful limb. It should be mentioned that he was in the hospital at Newchwang, and the splinters of bone were there removed. On the approach of the Japanese he left Newchwang and came on here.

The following three cases may be mentioned. Ma Ch'êng-ming was in the battle of T'ien-tsoang-t'ai, and was shot through the ankle. The Japanese were on the opposite bank of the river; their main force had crossed the river at some distance, and on the morning of the fourth day the Chinese found themselves surrounded; the latter fought till midday, and then beat a retreat. While thus running for his life this patient was hit by a rifle bullet, fired at a distance of half a *li*; it entered his left ankle $1\frac{3}{4}$ inches posterior to the internal malleolus. On removing the dressing the bullet dropped out of the open wound at the tip of the external malleolus. See Fig. 3. He was suffering from blood poisoning, and at one time his life seemed to be in danger, but he pulled through. A large-sized drainage-tube was passed through the ankle joint, and frequent irrigation with corrosive sublimate solution did much for him; he is recovering with an ankylosed joint.

Yang Chün-iung, a cavalry soldier, was likewise wounded in the engagement at T'ien-tsoang-t'ai. While he was riding a rifle bullet traversed the body of his horse and then got lodged in his ankle; the horse was killed. The wound of entrance had a diameter of one inch. The much contused bullet (see Fig. 4, see Picture IV) was found lying in the joint. Free through drainage and liberal feeding have enabled this man to make steady progress. He has a limited amount of movement in the joint, and the foot is in good position.

Hou Tei-shêng, wounded at T'ien-tsoang-t'ai. He was in the act of firing when a bullet hit him from before. It entered at the edge of the latissimus dorsi, where this muscle forms the lower border of the posterior boundary of the axillary space. The wound of exit was three-fourths inch external to and midway between the spinous processes of the 7th and 8th dorsal vertebral on the same side. The bullet passed between the scapula and the ribs without any injury to bone, and it passed out at the above mentioned point. The wound was healed on his arrival. From his account of the position of his arm when hit, it must have been such as to form an almost direct line from the wound of entrance to the wound of exit.

This man afterwards lost both feet from frost-bite. Amputation below the knee was performed on both limbs; he made a good recovery.

The conduct of the men, while in hospital, has been good. The greater proportion of them have regularly attended at morning prayers and other services held in the hospital. We rejoice in the fact that some left us changed men; they all were nicer in every way after they had been with us for a time. As each man left he took with him a copy of the New Testament, catechism, a calendar and various tracts. We pray that by God's blessing these men may act as living witnesses in the distant homes to which they have returned.

This Report would be incomplete without thanking Mr. Tenny, our able secretary, for his untiring and energetic management of the affairs of the Tientsin Independent Red Cross Society.

G. P. SMITH, M.B., C.M.

London Mission, Tientsin,
August 2nd, 1895.

REPORT OF VICEROY'S HOSPITAL.

It is to be regretted that owing to pressure of business and absence from Tientsin Dr. Lin, and the other doctors associated with him in the hospital, have not yet prepared a full account of the many cases which have come under their care for treatment.

Soldiers to the number of about 1,500 have been entered on the hospital books, but many of these, suffering from fever or slight injuries, remained but a short time.

The number of cases actually treated in the hospital were 611. Most of these have been discharged, while the others, with a few exceptions, are well on the road towards recovery. In this connexion it is interesting to note that a pension list is being made out, which will give to these poor soldiers, many badly maimed for life, some support for the rest of their days.

TRAUMATIC ARACHNITIS.

BY SYDNEY R. HODGE, M.R.C.S., L.R.C.P. (Eng.)

Compound Comminuted Depressed Fracture, Laceration of Sup. Longit. Sinus,

Hernia Cerebri, Meningitis and Arachnitis. Death on 15th day.

Yang Kwêh-yuen, aged twenty-six, in the employ of the government iron works at Han-yang, was brought to my hospital by Dr. Cuypers, the medical officer of the establishment, about one o'clock midday of Saturday, March 2. He was carried in on a stretcher, but was quite conscious on arrival. A large and heavy iron hook, with iron ring attached, used for pulley work and weighing several pounds, had fallen from a height of some thirty feet or more directly upon his skull. The injury being very severe, a deep com-

pound gutta fracture having been produced, it was determined to operate at once. The head having been shaved and washed Dr. Cuypers made the usual crucial incisions, freely exposing the area of injury. There was found a deep sulcus just behind the coronal suture, running from before backwards for about three inches in the line of the longitudinal sinus. The skull was severely comminuted (no less than nine fragments being removed), and the fragments were so firmly driven beneath the adjacent parts of the skull that it was impossible to move them until, with chisel and mallet, the bone around had been freely cut away. As soon as the fragments were elevated very profuse venous hæmorrhage showed that the longitudinal sinus had been lacerated. Some four or five pressure forceps only serving to diminish and not to stop the hæmorrhage, the wound was tamponed with iodoform gauze, the pressure forceps left in situ and firm pressure applied. The patient was put to bed with hot bottles around him, a bandage under his arm-pits and fixed to the head of the bed to prevent his slipping down, head supported with one sand bag under his neck and one on either side of the head to steady it; a man was placed to watch him.

March 3.—Oozing has continued to a sufficient extent to necessitate last night a gamgee-tissue covering being applied over the other dressings. Temp. 99.8; rapid pulse of 107. A large amount of urine was drawn off by catheter. Gave calomel gr. v.

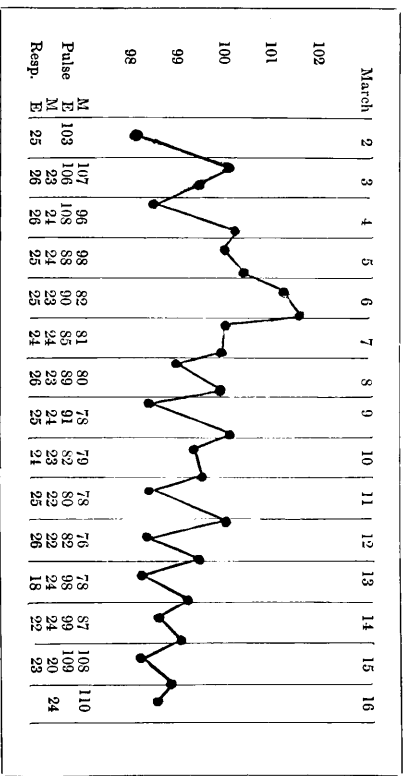
March 4.—Temp. lower; passed urine himself; comfortable; bowels acted.

March 5.—To-day removed forceps and dressings. There was a slight smell from some dried and decomposed blood on the outside dressings, but the inner dressings were all right, and the wound perfectly sweet. A small piece of depressed bone was found and removed for fear of after irritation. There was indication of commencing small hernia cerebri at two places. Part of each flap was sutured so as to bring pressure on the hernia, and the wound after irrigation packed with iodoform gauze with tenax externally. Evening temp. 100.2. Appears comfortable.

March 6.—Temp. higher, but he appears comfortable. Wound redressed; appears quite sweet, but hernia appears larger in size.

March 7th.—Temp. lower; wound sweet. In the evening found him groaning from pain in his head, necessitating a narcotic draught.

March 8th.—Temp. this morning normal for the first time. Wound sweet, but there is a good deal of sloughy material to come away yet. Slept better after his nepenthe last night. Ordered calomel and a saline draught to open bowels, which were constipated. Had to open up the sutured parts of the flaps, as beads of pus were showing beneath. About five p.m. the pain in his head was so great that I had to give nepenthe m. xv. At



evening visit there was a good deal of bloody oozing, which had come through all his dressings. On opening the wound it seemed to be coming from the left corner of the wound. After gentle irrigation sponge pressure was applied on the top of iodoform gauze. The hernial protrusion has increased to the size of a horse-chestnut. Temp. 99.8. Ordered nepenthe m. xx.

March 9th.—Forehead oedematous this morning. During the night a large mass of inflammatory material and blood clot has filled the angle of the wound, from which the bleeding came last night. Oozing having now stopped the wound was gently irrigated and dried with iodoform gauze. Ordinary flowers of sulphur were then powdered into the wound, which was finally dressed with tenax impregnated with the sulphur.

March 10th.—Wound under sulphur looks this morning cleaner than ever. On opening dressings there was an odour of sulphuretted hydrogen. A large blood clot came away. The hernia cerebri is smaller. Redressed with sulphur and tenax.

March 12th.—Complains this evening of having had great pain in his head for the last thirty-six hours, so gave chloral and nepenthe to relieve him.

March 13th.—Seemed very well when I came to dress him this afternoon at three o'clock, and sat up in a chair to be dressed. Whilst dressing him he was suddenly heard to be breathing in a loud blowing manner, and was found to be unconscious. The condition did not seem to have been preceded by any definite movements beyond that the hands were clutched; the right more firmly. After getting him in bed the right pupil was found dilated. Right cornea sensitive to touch and light; the left cornea insensitive to touch, but reacted slightly to light. Resp. 17; pulse 98.

4 p.m.—Still unconscious, but very noisy and restless. He now has definite paralysis of the left side of his face. There is paresis of the left side of the body; slight movement only being possible of the limbs on that side. Left knee jerk not exaggerated; no clonus. The left leg is more definitely paralysed than the arm. Could not test the right knee as he resisted. Sensation deficient all over the body.

March 14th.—Condition much the same; still unconscious; lips and tongue dry; has taken a little food; bowels not been open.

March 15th.—This morning he is quite sensible, and there is a slight return of sensation in the left cornea. Is passing his water and motious unconsciously. On opening the wound to redress it found a large mass of inflammatory material had been thrown out; some had come away in the dressings, and a good deal was more or less loose in the wound.

Evening.—Semi-conscious, but noisy and wandering; very restless. Pulse about 120, and very intermittent. Attempted an ophthalmoscopic examination, but the constant rolling of the eye made it impossible to get more than

a flash of the disc. Nothing seen beyond some pallor of the retina. Pupils are about the same size and react to light, but very sluggishly. The left cornea is still insensible. This evening he has passed his urine consciously, saying when he wanted to do so. Bowels been freely opened with calomel. Lungs normal. Sensation has returned on his left leg, but not in his arm. Has taken a fair quantity of food.

March 16th.—Passed a noisy night. Found him sinking into deep coma at my morning visit; both pupils inactive and corneæ insensitive; pulse uncountable. He died at noon, the 15th day after the accident. On removing the dressings, after death, there was found a large bulging of inflammatory matter and brain substance through the wound. The inflammatory œdema of the flaps and scalp had gone down some days ago, and there was no infiltration of pus anywhere.

REMARKS.—The fatal result in this case was probably due to arachnitis, secondary to inflammatory changes set up by the severe blow. The paralysis, setting in *suddenly*, was possibly secondary to the opening of some blood vessel in the area of inflammatory softening. There was no sign of septic inflammation, the wound being perfectly sweet; and I think the extensive traumatic inflammatory changes going on in the membranes of the brain are sufficient to account for the hernia cerebri. Not improbably there was thrombosis of the longitudinal sinus, and an embolus thence set loose may have had something, if not everything, to do with the subsequent paralysis and coma. As no *post mortem* was obtainable it is impossible to say what the condition was, but it is well to note that hemiplegia is a common symptom of direct traumatic arachnitis, without any definite *post mortem* naked eye changes in the brain, except slight discolouration of the cortical layer. Mr. Jonathan Hutchinson writes: "This hemiplegia is not due to compression, for the quantity of new material accumulated, whether fluid or solid, is usually not nearly enough for such a result. It is due, I believe, to the influence which the inflammatory process exerts upon the cortical layers of the hemisphere..... in my own practice I have never known an exception to the statement that arachnitis over the whole, or nearly the whole, of a hemisphere is denoted by paralysis of the opposite side."—Illustrations of Clinical Surgery.

CHINESE TREATMENT OF FEVERS.

In the *Sin-wen* native newspaper there lately appeared an article on Scarlet Fever, which the writer calls a new disease. In this respect it differs from cholera, which has been long known. "Sha-chi (scarlet fever) is not

mentioned by our medical authors till the Ming dynasty. They at first recommended acupuncture and the moxa only. Sha-cheng (the same) became severely epidemic about a century ago in the reigns of Chien-lung and Chia-ch'ing. It is specially obnoxious in Kiang-su and at Shanghai; it abounds particularly on account of the crowded state of the population. In North-west China operators thrash the abdomen with willow twigs dipped in hot water. In South-east China they use the edges of oiled rice bowls, or oiled cash to scrape the chest, back, arms and legs. They insert the needle under the tongue and at the tips of the fingers, or prick the skin in two long rows down the back."

In hot damp weather Chinese theory says hot moisture enters the lungs and stomach and proceeds to the region between the heart and groin. If it enters by the nose the lungs suffer, and these are in the gold region. If it enters by the mouth the stomach and other parts of the region of earth suffer. So the Chinese acupuncturist reasons, although so many books on medicine and the healing art have been translated into Chinese. Sad it is that it should be so, but it is hard to work conviction in the minds of those who do not wish to learn. They believe that the many millions of sick persons who have not died under the hand of China's practitioners must be counted as having been saved by their skill. All the credit of their escape from death is due to the theory which has prevailed for two thousand years. Fever is fire, and the centre of fiery influence is in the *San-tsiau*, the "three scorching regions." The mischievous vapour which causes fever, on reaching the region of the *San-tsiau*, below the heart, causes headache, and a hot-stage with ague following. Going a little farther in the same hot region the hands and feet are benumbed. Another step in advance, and pain follows in the abdomen with diarrhœa and dysentery. In severe cases the battle between air and fire now commences. Fever rages in the whole bodily frame. Air fans fire, and fire disturbs air. The result is that the stomach dries up and feverish air is spread through the whole body of the patient. If very violent the fever turns to cholera with its peculiar spasms. Now is the time when the needle and the prescription can both be properly used. As to acupuncture the old mode of treatment with nine knives, or lancets, has long been forgotten. At Shanghai regular physicians treat patients with medicine. Practitioners who believe in the needle use several of these implements of different lengths. If they know where to insert it a cure follows on one puncture.

They distinguish between the office of the needle and that of medicine. The needle perforates the veins and other vessels and keeps the blood and other fluids in a state of movement. Medicine imparts aromatic fragrance, sweeps away impurities, dismisses heat, and searches out injurious vapours. With great persistency they adhere to the language of the past, especially that of the an-

cient works—Su-wen and Ling-ch'ü—both of them written about two thousand years ago. They are loath to investigate the body in the way that Harvey and Haller have taught us to do. The human body ought to be studied by the physician as a wonderful organism found in nature with a vast number of mysteriously beautiful processes, some of which are understood and some of which are waiting for the investigator to explain them. The physician when learning his profession must study physiology and the other medical sciences, and be acquainted with remedies used in various countries for the restoration of normal activity when the human organism is diseased. Chinese physicians are content with tradition and such help as experience in the treatment of diseases can afford. The insertion of the needle they know may be most harmful to a patient. They say this themselves. For example this *Sin-wen* writer does so. At present only what is called the *Hau-chên* is in use. The *Hau-chên* is long, thin and pointed. The skilful acupuncturist thinks he knows where to insert it. The bungler pricks at a dangerous point, and may unexpectedly either make the patient an invalid for life, or put him in a moment out of existence. The skilful practitioner is he who knows "the cave." There are good and bad acupuncturists. The good operator inserts the needle in the right place, and the cure is effected in a minute. Yet, they say, people when they feel ill, will call in a barber and allow him to use the needle. He does so, though he may not understand the differences in diseases. He makes, we will suppose, a mistake about the position of the cave. In an uncertain random manner he uses his needle; and what is the result? The patient may recover. The sick man is himself delighted. He does not know that his attack was a very slight one, and that he would have recovered without acupuncture, by only taking the common remedies against hot weather fevers. But the result may be that he dies. The vital cave has been pierced by a bungling operator. The blame is not laid on him, but the writer thinks it ought to be. This author represents acupuncture as depending on the region between the heart and the groin for the source of its efficiency. The breath and blood of the whole body are ruled from this region, and whatever bad vapour enters the body, must pass here. The parts which must be punctured for headache and giddiness are at the upper end of the nose ridge to a depth of three-tenths of an inch, and at the back of the neck in a fleshy part to a depth of one inch. For tightness of chest and stomach, with low spirits and abdominal pain, there must be puncturing at two points, one four inches, and the other five inches above the umbilicus; the perforation to be one inch deep. Then for cholera and dysentery the points of perforation are at two inches above and two inches below the umbilicus; the depth being one inch in each case. For convulsions in the feet the acupuncture cave is at the back of the leg at a point one Chinese foot from the ground. Here again the needle must enter one Chinese inch.

In following these rules the Chinese operator who despises the barber, because he does not know where and how to insert his needle, is himself guilty of extreme negligence in not studying foreign works on physiology and anatomy, in order to learn the real position of these acupuncture caves in relation to vital parts in the body. He has no sound basis for his theory, and yet he will not learn from such foreign books as have been translated into Chinese and contain a careful description of the anatomy and physiology of the human frame. The physicians of China would do well to follow in the track of the Japanese and study carefully the medical sciences of the West. Not one of them can give a satisfactory reason for acupuncture at the points here mentioned, and while the lives of their countrymen depend on their knowledge and skill they decline to enlarge their acquaintance with the true principles of the physician's noble art. No operator ought to be allowed to practise without a license, and no license should be given except to those who have a real acquaintance with medical science.

JOSEPH EDKINS.



The China Medical Missionary Journal.

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Editorial.

A Merry Christmas and, as our next number is not due until March, 1896, a Happy New Year to all our readers. Our first year of editorial life has now passed into history, and we wish the number of those to whom we are indebted for help received were much larger than it is. Fourteen members only of the Society, out of our large membership, have sent us contributions, but to these we tender our sincere thanks; especially so to Dr. John Fryer who, from a busy life, has ungrudgingly spared time to do much editorial work in Shanghai. The attempt to edit the journal at a distance of six hundred miles from our printer, with no rapid railway communication between us, has been a trial of Christian patience and endurance to both editor and printer. We trust, however, that the experience of the past will enable us to surmount and avoid many of the difficulties which have, hitherto, beset us, and with the indulgence of our readers we hope to behave better editorially in 1896 than we have in 1895. We should much like to publish an ambitious programme for the coming year, and confess that such a programme exists in shadowy form in our mind. But as we do not propose to write the whole of the journal ourselves (though we have come perilously near to it in the past), and as we have neither the time nor the opportunity to travel about to stir up sleepy souls, we refrain. We do, however, make one or two suggestions. Will the members remember that the editor is a very busy man, with a large hospital practice, and finds it difficult to spend time writing letters dunning people for articles? Will they all make a resolution to send *at least* one article a year to the Journal? Will the collaborators who have either sent nothing to the journal this year, or the veriest scrap, repent of their sins and justify their high sounding title in 1896? May we especially ask that interesting items for the "Evangelistic" heading of the Journal be regularly forwarded. The "Notes and Queries "

column, too, deserves more hearty support, and we trust that in the coming year members will avail themselves of it.

If we have in any way helped on the medical missionary cause during the past year we rejoice, and would once more remind our readers that this is the lofty aim of our Journal and Society, and its fulfillment rests more with the members than with the editor.

In forming a more or less public association there are two ways of going about the matter. One is for a few gentlemen to meet together and draw up a circular, stating briefly the objects and aims of the projected society, for circulation amongst those likely to favour the suggestion. The circular generally requests those willing to join to forward their names to some gentleman, previously selected, who, should the matter be taken up warmly, appoints a day for a general meeting to form the society. Another way is for a few gentlemen to at once form themselves into a society, draw up a set of rules, and then invite others to join. The latter was the course which, for reasons which are not difficult to arrive at, those adopted who founded the Medical Missionary Association nine years ago. The constitution which they then drew up they themselves would be the first to acknowledge was tentative and somewhat experimental. The problems they had to face, arising from the peculiar circumstances under which the society would have to work, were not easy of solution. They worked out the best solution they could, and if the test of experience has shown that some points need modifying, and some difficulties have not been met, we still owe a debt of gratitude to those first legislators, whose work has been so useful to us.

We propose briefly to indicate where in our opinion experience shows that the original constitution needs modifying, as well as to indicate other reforms which are desirable.

Article III. is both ambiguous and unworkable. It is unworkable for the simple reason that a man living in Manchuria can scarcely sign the constitution which may be in Canton; this rule has, therefore, in practice been ignored. It is ambiguous because the first and last clause provide different methods of electing members. As the matter stands now no one can be elected a member of the society at a conference (which is the only occasion on which regular meetings of the society are held) unless his name has previously been proposed in the Journal,

which is obviously inconvenient ; neither can any one elected by voting in the Journal be considered a member until such election is confirmed by a two-thirds vote of a regular meeting, which is absurd.

Article V. provides fifteen officers for the Association, the great majority of whom have nothing to do. Vice-Presidents were appointed for various districts in the hope, we presume, that local branches of the society would be formed, over which they could preside. Even so there is not the slightest necessity that they should be officers of the Association, especially when it is a not infrequent occurrence that the legally elected Vice-President resides miles away from the central place of meeting. It has always been a puzzle to us, too, to know what are the duties of the six censors. A member once wrote to us for information on the subject, but we were unable to satisfy him ; their duties are not defined in the Bye-Laws. We suppose their duties, on lines similar to the censors of the great medical bodies, would be to examine into, and adjudicate upon, any cases calling for expulsion from the society, or to veto any nomination for election. This is, however, a mere guess on our part, and if correct we should think we might well dispense with their services. To be called upon once every two years to elect fifteen different officers from a society, the great majority of whose members are strangers to one another, is a great task to impose upon people, and the fact that so few voting papers are filled up at the bi-annual elections testifies that it is one which the majority of our members cannot accomplish. We would suggest that the following five officers are ample for the needs of our Association, viz., a President, a Vice-President, a Secretary, a Treasurer, and an Editor. The election of one Vice-President only would shed a ray of light on the meaning of Article II. of the Bye-Laws, which provides that *the Vice-President* (sic) shall preside at a meeting in the absence of the President.

Article IV. of the Bye-Laws needs careful and thoughtful revision ; the working of the financial department of our Association has been a constant difficulty. We are not prepared at the present time to make any suggestions, but point out that the practice of publishing the accounts in the Journal has superseded the "reporting of the condition of the treasury to the President." This is, to our mind, a better and more workable method, and it would be well to alter the Bye-Laws accordingly.

Article VI. of the Bye-Laws needs alteration. It was framed oblivious of the fact that all voting on such motions is done through the Journal, and no provision is made for amendments, etc.

By far the most important piece of machinery in our Association is the Journal, and there are many matters connected with its management and conduct which need careful attention. The amount of work which for want of proper and sufficient help, falls upon the Editor, is overwhelming, and it is a very serious question whether any man is acting fairly by his society and his work in giving up his time to it. There should be two Sub-editors, appointed to definite departments of the work, who would relieve the editor of a good deal of drudgery.

There are other suggestions on this subject of the constitution which we shall make on another occasion, and which we trust will be discussed in the pages of the Journal. Then when the time arrives for another medical conference, and we think the time is not far off, we shall come prepared in some measure to approach this matter with instructed minds.

Queries and Answers.

Query No. 3. Answer:—"In my experience, which covers five years, I have never had a case of obstinate diarrhœa. During this time I have seen over seven hundred opium patients, ranging in age from sixteen to seventy-five years, including smokers of forty years' standing down to those who had only smoked a few months, and those who had smoked the finest imported opium down to those who eat the ashes from the pipe.

I do not mean to say that it does not and could not occur, but I have not had a case in my experience with those in the hospital breaking off opium. When it does occur I can explain it no better than to quote the words of America's great therapist, Robert Bartholow, where he says, "The secretions of mucus, and the special glandular apparatus of the gastro-intestinal mucous membrane are lessened by opium, and hence the digestive and peristaltic movements are less active. The secretion being thus locked up dullness and hebetude are experienced, the skin looks muddy, the tongue is coated and the breath offensive.

When the influence of the opium ceases it not infrequently happens that the constipation is succeeded by relaxation of the intestine and rather profuse and fetid evacuations, and increased urinary discharges take place."

This explanation is, in my opinion, sufficient to account for such a condition when it does occur, but acting on this opinion we have made it a rule in nearly every case, when admitted, to give them a mild laxative like *Oleum Ricini*, or a more

active cathartic like *Magnesia Sulph.*, thus cleaning the bowel before the influence of the opium has passed off. I have no reason to doubt that the absence of the obstinate diarrhœa is due to this preliminary treatment, Castor Oil or *Magnesia Sulph.* On the other hand, I have met with fatal cases among opium patients brought into the hospital on account of dysentery, where the bowel seemed to have lost all tonicity, and Morphine in full doses had no effect whatever. In a large percentage of these cases treatment proved of no use. The pathological state of the bowel was such that opium and its preparations had no effect in controlling it.

We lost the use of one of our best therapeutic agents when deprived of opium in this condition.

J. H. MCCARTNEY, M.D.

[Dr. McCartney's experience is different from ours, though we must confess we have not adopted his treatment. It would be interesting to know whether others have adopted it, and whether their experience is the same. With regard to such matters as these it is easy to have a long run of cases and never see certain symptoms, and thereupon to build a theory; one day a case comes under our notice which disposes entirely of all our former ideas. We must confess, however, that 700 consecutive cases gives Dr. McCartney a right to speak; we are not quite convinced though, and chiefly because the treatment scarcely seems to us to be the logical outcome of the explanation—*Ed. M. M. J.*]

Medical and Surgical Progress.

SOME ADVANCES IN CARDIAC THERAPEUTICS.

By William C. Krauss, M.D., Buffalo, N. Y.

A cardiac stimulant is described by Dr. W. H. Porter as a remedy that calls into action the intrinsic or stored-up motor power of the cardiac muscle without directly affecting its nutritive condition. Have we at our command an agent that fulfils all these requirements? I believe we have, and recent investigations have proved that in strychnine we have an ideal cardiac stimulant whose worth is beginning to be recognized and appreciated. The attraction existing between strychnine and the vagus centre is an accepted fact; hence, besides its power as a cardiac stimulant, it acts with equal force upon respiration, digestion, and assimilation. It may, therefore, be said to strengthen the heart directly through the vagi, indirectly through improved muscular tonicity the result of increased activity of the digestive organs.

Porter, in a recent lecture, described the action of strychnine upon the heart as follows:—

The tone of the heart-muscle is improved, compensation effected and prolonged beyond the period of administration, because the amount of contractile tissue is increased. A building-up process is the result, not alone of the effect upon the circulatory centre, but because the nutrition of the heart, as of the rest of the body, is improved by reason of the action of the drug upon the digestive process.

Reichert, of Philadelphia, has published perhaps one of the best papers on strychnine, and concludes there can be no doubt that strychnine exerts a number of important independent actions on the circulatory apparatus. The action was not

exerted on the accelerator apparatus of the heart or on the heart-muscle. The typical and important effects during the stage of excitement are: a primary decrease in the frequency of the pulse, due to stimulation of the cardio-inhibitory apparatus; then an increase, due to a depression of the same; finally, a decrease, due to a depression of the excito-motor ganglion in the heart.

He found that the drug exercises a stimulating influence on the vaso-motor system, followed by one of depression; that the increase of the arterial pressure is due to a stimulation of the vaso-motor centres in the medulla, and the fall to their depression, which is preceded and assisted by a depression of the heart.

Strychnine is especially indicated in the weak heart of pneumonia and the febrile processes in general. In these affections it is superior to digitalis, or even the rapidly acting, diffusible stimulants, such as ether, alcohol, Hoffmann's anodyne, and the preparations of ammonia. It should be given hypodermically in $\frac{1}{10}$ to $\frac{1}{30}$ grain doses, repeated until some sign of the action of the drug is manifested.

Washburn, in the *Therapeutic Gazette*, for February, 1894, narrates a case of chloroform-poisoning with suicidal intent where hypodermics of strychnine repeatedly given were followed by recovery of the patient. In another case of chloroform anæsthesia where the patient did not recover quickly, but appeared blanched, with an almost imperceptible pulse, rapid improvement followed upon the hypodermic injection of $\frac{1}{10}$ grain of strychnine.

In the alarming symptoms which often occur during surgical anæsthesia, hypoder-

mics of strychnine act in a wonderful manner, and its use in such cases is gaining favour rapidly. Morton, of Philadelphia, resorts to it at once in cases of surgical shock. In weakness of the heart due to depressed nerve-force, strychnine is of paramount importance, and likewise in those cases of weakened heart's action due to influence of the emotions acting reflexly upon the cardio-inhibitory centre.

In the cardiac weakness often associated with neurasthenia, I have had excellent results with this drug, and from its manifold effects regard it as one of the most important agents in the Pharmacopœia.

The heart may be made to do increased work in three ways: first, though the relaxation of a normal inhibitory control through the vagus nerve by the cardio-inhibitory centre; secondly, through the sympathetic (motor) fibres in the vagus itself; and, finally, through fibres with similar action in the sympathetic system. *Strychnine* acts upon the heart in the first and second ways just mentioned, and *strophanthus* acts as a cardiac stimulant or tonic in the second and third ways.

The literature touching upon *strophanthus* is as yet meagre, and conflicting opinions exist as to its value and efficiency in cardiac therapeutics. Reports are coming in, however, that bid fair to make it outrival its adversary,—*digitalis*,—as the action of the two drugs upon the heart is quite similar. To Professor T. R. Fraser we are indebted, along with Drasche, Zerner, and Loaw, for much that we know regarding the physiological action of this drug. The precise mode of action—that is, its specific action—is as yet not well understood. It slows the heart-beat, lengthens the interval between the contractions, and increases the energy of the muscular tissue. Its effect on the circulatory system, according to Shoemaker, is as follows: it lessens the ischæmia of the arteries and increases the rate of the blood-current to the veins, but does not materially

affect the calibre of the arteries. *Strophanthus* has been used with good effect in the progressive heart-failure of elderly people, in angina pectoris, but more especially in the tachycardia so often present in functional and organic nervous affections. Moncorvo employs it in almost any period of childhood, from fifteen months to fifteen years, and has never observed the slightest intolerance of the remedy. The strength of the heart was always considerably increased and its rhythm steadied without detriment to the arterial tension, which was generally augmented and always regulated. Moncorvo is in the habit of giving from 6 to 10 drops of Fraser's tincture in the twenty-four hours. This author quotes eight cases of mitral disease accompanied by the usual symptoms,—palpitations, dyspnoea, insomnia, etc.,—improved and finally completely cured by *strophanthus*. In children reduced by severe dystrophic affections, *strophanthus* is a valuable indirect tonic. In asthma it acts upon the unimpaired cardiac muscle, but has no influence upon the asthmatic symptoms. Parenchymatous nephritis, with or without disturbance of the heart, is benefited, and the infiltration disappears after use of the remedy. The action of the heart is rapidly stimulated and rhythm of the pulsations is secured. In the pulmonary and broncho-pulmonary diseases of children, so commonly complicated with cardiac asthma, *strophanthus* plays the part of a cardiac tonic.

It is, however, to its use as a cardiac sedative that I would call your particular attention, and more especially in that form of tachycardia so common in Basedow's disease, or exophthalmic goitre. Tachycardia is the most constant of the three cardinal symptoms of this disease, the exophthalmos and goitre being less pronounced and very often one or both entirely absent. In fact, in many cases the tachycardia will be the only symptom present for months, and on this account

many cases of Basedow's disease are overlooked and wrongly diagnosed. Where the goitre and exophthalmos are absent or ill developed, the syndrome of Basedow's disease resembles rather closely that of neurasthenia, and these patients are treated as simple cases of "nervousness" by the majority of physicians. The writer has seen and treated ten cases of this disease within the past three years, and has met with uniformly good results in every case. The tincture of strophanthus was prescribed in each, along with the mild galvanic current, in those cases where this was possible. In one case of a young girl, with a pulse of 130 to 150 per minute, with a slight degree of exophthalmos and no thyroid enlargement, the trouble was diagnosed as "heart-disease," and the family counselled to return home immediately from Chicago, where they were attending the World's Fair. Terror-stricken and heart-broken, metaphorically speaking, they brought their daughter home as hastily as possible, so as to allow her to die peacefully in her own home. After six months of strophanthus medication, with occasional applications of galvanism to the sympathetic nerves, she is to-day as active and healthy as any girl of her age.

Another case—a young married woman, seen by me in the Buffalo Woman's Hospital, with an exaggeration of all the symptoms of this affection—made a slow but almost complete recovery under the use of strophanthus alone.

A third case, in which none of the symptoms were very well marked, but which had resisted all forms of treatment, yielded promptly to strophanthus in 5-drop doses twice daily.

Without taking the time to report the details of the other seven cases, I can say of them that the results of treatment were not merely temporary, but permanent. In some nerve tonics were administered along with strophanthus, but I do not believe that

they acted upon the sympathetic nervous system, but upon the cerebro-spinal.

Ferguson, of Troy (*Therapeutic Gazette*, February 15, 1894) has had uniformly good results with this drug in Basedow's disease, and has observed no relapses. Recognizing tachycardia as an early symptom, he has been able to forestall the blossoming out of the disease through the use of strophanthus. Many of the ablest neurotherapists, as Gray, Gowers, Strümpell, Hirt, and Seeligmüller, make no reference to it in describing their treatment of this disease, while Hammond, Oppenheim, Corning, Thompson, and others rely upon strophanthus far controlling at least the tachycardia.

In the passing procession of cardiac therapeutics, strychnine and strophanthus are in the lead, and doubtless will become more prominent and retain their supremacy because of their influence over the vital centres in the medulla, to which the various systems of the body look for support and encouragement.

ANTISEPTICS IN MIDWIFERY.

Under the heading of "Comparative Studies," the *Practitioner* reviews the antiseptic methods employed in certain lying-in hospitals and those recommended by leading authorities. At Queen Charlotte's Lying-in Hospital, London, the following measures are adopted: The patient on admission to the hospital, before entering the labour-ward, is washed from head to foot and clothed in garments provided for the purpose. On entering the ward, before any vaginal examination is made, the vulva and surrounding parts are thoroughly washed with soap and hot water, and, the soap having been removed with plenty of water, the vagina and vulva are irrigated with a solution of perchloride of mercury 1 in 2000. Any rings worn by the obstetrician are removed and the hands well washed with soap and water and scrubbed with a nail-brush. The hands

are then immersed for not less than one minute in a solution of perchloride 1 in 1000. As a lubricant vaselin and perchloride 1 in 1000 are used, and the jar containing it is kept permanently immersed in a basin of 1 in 1000 perchloride solution. When delivery is completed, a warm vaginal douche of 1 in 2000 is given to all patients. Forceps and other instruments before being used are boiled in water in a vessel resembling a fish-kettle in shape. The solution of perchloride of mercury is made from ordinary tap-water, and no acid or other substance is added except some colouring material.

At the General Lying-in Hospital, London, where the antiseptic methods adopted have met with so large a measure of success, the rules are much the same as those above mentioned. The vulva is cleansed and a vaginal douche is given before and after delivery. The lubricant employed consists of glycerin and perchloride 1 in 1000, a small quantity of hydrochloric acid being added to the mercurial solution.

At St. Mary's Hospital and Manchester and Salford Lying-in Institution the methods are as follow: The nurses are taught to thoroughly cleanse the hands with soap and water and turpentine, and then to soak them in a solution of perchloride of mercury 1 in 1000 for five minutes. The vulva is always cleansed with soap and water, and then with the mercurial solution 1 in 1000; but a vaginal douche is only given before labour in cases where there is evidence of septic discharge, as, for example, where there is profuse leucorrhœa or vulvitis. It is, however, given in cases where operative measures are to be undertaken. The lubricant used is glycerin and perchloride, 1 grain (0.065 gramme) to the ounce (31 grammes). After delivery a douche of perchloride of mercury 1 in 6000 is given in all cases.

At the Rotunda Hospital, Dublin, the following plan is adopted: The vulva is washed with soap and then with lysol solution at the commencement of labour. It is be-

lieved that this hardens the tissues less than corrosive sublimate. A vaginal douche is not given either before, during, or after labour in uncomplicated cases, nor during the puerperium. Four vaginal examinations are all that are allowed during the entire course of a normal labour. The hands are carefully scrubbed with soap and water and a nail-brush, and the latter is kept constantly immersed in a creolin solution, and, as an additional precaution is boiled once a week. All soap having been washed off, the hands are soaked and scrubbed with a special brush for one minute in a solution of perchloride of mercury, 1 in 500, to which some tartaric acid has been added. The hands are not dried before examining, and no lubricant is used under ordinary circumstances. If, however, the hand has to be passed into the vagina, then soap is the lubricant preferred. Carbolic soap is usually employed, but no stress is laid on this, as ordinary soap, when once its surface is melted off by hot water, may be regarded as an aseptic substance. Before obstetrical operations the vulva is scrubbed with sterilized tow, soap, and 2 per-cent. creolin solution. The vagina is scrubbed out in the same way with soap and the 2 per-cent. creolin solution.

Professor Tarnier, late Surgeon to the Maternity at Paris, recommends the following plan: The hands are washed and scrubbed with a nail-brush in a solution of 1 in 4000 perchloride of mercury, soap being used. The depression around the nails is cleansed with a wet cloth, the hands washed in alcohol to remove the fatty substances, and steeped in a perchloride solution. A vaginal douche of perchloride of mercury is always given before and after delivery, and the greatest care is exercised in cleansing the vulva. At the termination of labour an intra-uterine douche of iodine and water is given in all cases, the following formula being the one employed: R. Tinct. iodi, 1 fluidounce (31 cubic centimetres); potassi iodidi, 1½ drachms (6 grammes); aq. destil.,

32 fluid ounces (1000 cubic centimeters) Ft. lotio. Instruments are sterilized in a specially-devised dry-heat sterilizer. The following solution known as Van Swieten's fluid, is employed: R. Hydrarg. perchlo., 1 part; alcohol, 100 parts; aq. destil., 900 parts. Misce et ft. lotio. This lotion is diluted with four times its bulk of water before us; so that the strength then becomes 1 in 5000. Professor Tarnier believes that this is less toxic than mercurial solutions made with tartaric acid.

Professor Winckel, of Munich, adopts the following plan: The genitals are washed with a 3 per cent. solution of carbolic acid and then dried with salicylated cotton-wool. Vaginal injections before delivery are not necessary in all cases, but when given carbolic lotion of the strength mentioned above is used. The hands and arms after washing are soaked either in a 3 per cent. solution of carbolic acid or a solution of perchloride of mercury 1 in 1000.

It will be observed that the methods described above admit of being divided broadly into (1) methods for disinfection of hands and instruments, and (2) methods for disinfection of the patient. It is universally acknowledged that the preliminary and most essential step is to thoroughly cleanse the hands with hot water, soap, and a nail-brush, and then to immerse them for a minute in an antiseptic solution, repeating this immersion before each subsequent examination of the patient. The most widely used antiseptic is perchloride of mercury. Some of this is lost by forming an insoluble oxide when mixed with ordinary tap-water; and as distilled water is not available in private practice, the following formula is recommended as insuring a stable solution: R. Pulv. hydrarg. perchlor., 10 grains; pulv. acid. tartarici, 20 grains; cochineal, 1 grain. M. et. ft. pulv. One powder added to a quart (litre) of water makes a solution of 1 in 2000.

The following routine procedure is sug-

gested as not being unnecessarily complicated, and easily carried out by the general practitioner if a competent nurse is in attendance. Before full term is reached an order should be given to the patient to procure a packet of absorbent cotton-wool, an ounce of sublimated vaselin (1 in 1000), and twelve powders prepared according to the formula given above, or, if preferred at least two quarts of carbolic lotion (1 in 20.) The nurse is instructed to wash the vulva with soap and water as soon as the labour-pains begin and then thoroughly sponge it with cotton-wool soaked in the antiseptic. A fresh supply of the antiseptic solution is then to be prepared and placed on a table by the side of the bed, together with the jar of vaselin, so as to be in readiness for the doctor when he arrives. Before making any examination the hands are washed with soap and water, and then immersed in the antiseptic solution at the patient's bedside. The vulva should be sponged from time to time with pludgets of cotton-wool soaked in the antiseptic.

After labour is over, and during the puerperium, three basins should be placed side by side on the wash-stand, and permanently kept there. The first is to be used for washing the hands; the second to contain a solution of perchloride of mercury, freshly prepared each morning by the addition of one of the powders to a quart of water; the third basin to contain a solution of the perchloride, in which are kept the glass vaginal tube and catheter; but, if douching is not employed, the third basin is not necessary. The nurse is instructed to soak her hands in the solution contained in the second basin before doing anything for the patient which involves contact with the genital organs. If this plan is insisted on and explained to the nurse, there is no reason why in most cases in private practice antiseptic precautions should not be carried out as efficiently as within the walls of a well-managed hospital.

RECTAL EXAMINATION OF PREGNANT WOMEN.

W. H. Beckman has tried this method with great success in 100 parturient women, the details of pelvis and cervix being easily made out. The length of the pregnancy and state of the bladder could not be determined in 7 per cent. of the cases, and the fontanelles and sutures could not be felt in 28 per cent., but this was less important, since the position of the foetus could easily be detected by external examination and especially by auscultation. It was always possible to distinguish the occipital from the frontal portion of the head. The advantage of rectal examination is that infection through the genitals is avoided, the only objection being that sometimes examination through the vagina may become necessary, and that infection may occur through the examining finger, though the latter is easily disinfected, since the rectum does not contain specific microbes. The author considers rectal examination of great value to midwives, enabling them to determine if the presence of an obstetrician will be necessary. Zweifel's experience in the Leipzig obstetrical clinic showed that students instructed in this method of examination could determine all the necessary details without recourse to vagina examination. Ries believes that midwives should be forbidden to make examinations through the vagina, as their duty is only to assist at normal births. Kroning is inclined to permit vaginal examinations only (1) when it is difficult to determine through the rectum what part of the foetus is presenting, (2) when the midwife is not able to bring about relaxation of the cervix, and (3) when the pains last more than two hours.

SYPHILITIC HEADACHE.

Certainly no syphilographer living to-day, and probably none who has ever studied this subject, is better fitted than Fournier, not only from his profound study of the

subject, but from his wonderful personal experience of cases, to speak authoritatively upon the subject of cephalic syphilis. In a series of papers contributed to the *Gazette Médicale de Paris* for June 1, 8, 15, and 22, he traverses this subject with that thoroughness and brilliancy which makes his every utterance upon his chosen topic of interest to the whole scientific world. He points out that pain in the head is one of the most frequent manifestations of secondary syphilis, while the prodromal headache of tertiary encephalopathies is universally recognized and described. It is, however, unfortunate that the term specific cephalalgia conveys to many minds the impression of a single pathological process, when, as a matter of clinical fact, the lesions may be and often are widely diverse in their nature. The single symptom common to all is pain in the head. Thus, this pain may be due to specific neuralgia, affecting one or more of the cranial nerves, constituting what is called neuralgic headache. Or it may be due to a lesion in the cranial bone, such as periostitis, gummatous osteoma, causing bone pain. Or it may develop as neuralgia without bone lesion, in which case it is often impossible to locate it. In many respects it differs not at all from headaches due to causes other than syphilis. Finally, there is a headache which, though dependent on syphilis, is not syphilitic in nature; in other words, it is a parasymphilitic neurosis.

Symphilitic neuralgias are not headaches in the true sense of the word; the pain is located in the trunk or distribution of a given nerve, and is aggravated by pressure upon certain portions of this nerve, particularly points of emergence. The supraorbital is most frequently affected, extreme tenderness being elicited on pressure over the supraorbital notch. This pain may affect the upper branches of the fifth pair, or the auricular and mastoid filaments of the cervical plexus, or the occipital nerve, but it is most frequently observed attacking the fifth pair, and has

for its type the supraorbital neuralgia. This affection is observed during the early stage of the secondary period,—that is, in the first six or eight months of the disease. It is impossible to state whether or not it is dependent upon organic lesions. When it occurs during the tertiary period, it is nearly always due to a distinct lesion; often the pressure of a gumma or bony outgrowth. These specific neuralgias are characterized by almost identically the same symptoms dependent on neuritis from other causes. They have, however, a tendency to become worse at night, and yield promptly to specific treatment. Indeed, the therapeutic test is the only means of making a positive diagnosis.

Pain due to zone lesions may occur in the early stages, during the height of the disease, or at a late tertiary period. It is most frequent in the tertiary period, and is readily recognized, since the lesions are gross, producing considerable deformity. Secondary lesions are slight, circumscribed, and readily overlooked, especially when they develop in the hairy scalp. They occur during this early period as periostitis, periostosis, or as ostealgias characterized by circumscribed areas of hyperæsthesia without appreciable lesion. These lesions are very common, especially in women, and are usually overlooked. The periostites produce slight circumscribed swelling of the bone, particularly in the parietal, temporal, and frontal regions. The involved areas are small,—about the size of a ten-cent piece, sometimes as large as a fifty-cent piece,—very slightly raised, sometimes obscurely fluctuating. They are painful and extremely sensitive. This excessive sensibility is a characteristic sign. Periostoses offer the same symptoms, and are even more painful. They are, however, more dense and resistant, and last longer. There is true bony proliferation on the surface of the bone.

The ostealgias are characterized solely by pain. There is no swelling and no ap-

preciable alteration of any kind. The pathological alteration occasioning this symptom is absolutely unknown. The pain of these bone affections is sometimes agonizing, and often radiates over a very large surface. The diagnosis is founded upon careful and thorough palpation of the entire cranium.

Headaches due to syphilitic affections of the brain or its envelopes are more diffuse and more deeply placed than those dependent upon bony lesions or upon neuralgia. It is impossible from the symptoms to decide whether they are dependent upon lesions of the meninges, the cerebrum, the blood-vessels, or whether all these structures are involved.

Clinically, three varieties are recognized: secondary encephalgia, headache symptomatic of cephalic lesions, parasyphilitic headache due to hysteria or neurasthenia. By all odds the most important variety is the migraine preceding grosser symptoms of cerebral syphilis. In certainly two-thirds of all the cases of hemiplegia, amnesia, epilepsy, coma, pseudo-paralysis, etc., dependent upon syphilis, there is this prodromal headache. A large percentage of these cases could have been saved from these grave accidents by vigorous treatment instituted during the period of prodromal headache. This headache differs from other cephalalgias, as, for instance, those due to neuralgia or epicranial rheumatism, from the fact that it is felt to be deep within the head. The character of the pain varies; there may be simply a *sense of weight* and mental hebetude, or there may be a constrictive pain, as though the head were screwed in a vice; or, finally, the sensation may resemble that produced by blows of a hammer, the suffering being very intense and the pain being deeply placed.

These three types may be associated, or may succeed each other. The pain may be sharply circumscribed to an area not larger than a half-dollar. In this case it frequently indicates the formation of a gumma.

Sometimes it is diffuse, occupying a general region, as the frontal, or temporal, or parietal, or occipital, or spread over two or more of these regions. Exceptionally it seems to involve the whole head. The fronto-parietal region is the one most frequently subject to this pain. This pain has three characteristics which should at least strongly suggest its nature. There is an habitual intensity, sometimes extraordinary severity, of pain. It is persistent, tenacious, long-lasting; there are nocturnal exacerbations. Even in mild cases the pain is less bearable than the ordinary headache; it harasses the sufferers, making them despondent, morose, excitable, sleepless, and interfering with general nutrition; or it may be so severe as to completely prostrate them. Exceptionally the pain amounts to a veritable anguish, comparable in intensity to that of hepatic or nephritic colic.

Nocturnal exacerbations of pain, though the rule, are by no means invariable. In the secondary period this characteristic is most pronounced; in the tertiary period it may be wanting entirely; indeed, it may happen that there are nocturnal remissions. As a rule, syphilitic cephalalgia precedes the grave developments of brain syphilis by an interval of three to six weeks; it is, however, not uncommon for this pain to last three to six months; exceptionally the pain may exhibit remissions and exacerbations for two or three years. Under the influence of intermittent, mild, specific treatment, the headache may be temporarily cured, to recur time after time, till symptoms such as hemiplegia or epilepsy show that irreparable damage has been done.

The prodromal headache is a sign of inestimable value, enabling a treatment to be instituted in time to prevent grave lesions. This treatment should be instituted early, should be vigorous, should be long continued. It is not sufficient to cure the headache; the underlying constitutional taint must be eradicated in so far as this is possible.

This treatment should combine mercury and potassium iodide, each given in the most active form and manner possible. Every ten days an injection of $1\frac{1}{2}$ grains of calomel should be given, repeated as often as is required. Internally, the iodide of potassium is to be administered: to a woman, 1 to $1\frac{1}{2}$ drachms a day; to a man, nearly twice this dose. This treatment should be long continued, with appropriate short intervals of rest, until there is good reason to believe that there is no likelihood of further recurrence.

Among the parasyphilitic affections causing headache may be mentioned the neuralgic migraine and the crises of pain often observed in tabes. The most important affection and by far the most common is neurasthenia. This is an ordinary sequence of syphilis, and among its multitudinous symptoms none is more troublesome or more frequent than headache.

This parasyphilitic neurasthenic headache is characterized by very moderate intensity; it is not really a pain, but rather a sensation of weight or constriction, of dulled or imperfect cerebral action. As to duration, it usually lasts several years. It is present in the morning on rising; is sometimes better after meals, but shortly returns with its original intensity, or even with a slight excess of this; it is better at night, so that sleep is not disturbed. It is not benefited by specific treatment; it is usually located in the occipital region; and, finally, it is usually associated with other signs of neurasthenia. These are characteristics which sufficiently distinguish the cephalalgia from pain prodromal to the recognized cephalopathies; indeed, a headache which has lasted for several years almost certainly does not belong to the latter class, since apoplexy or some one of the serious symptoms denoting irreparable lesion is quite certain to develop long before the expiration of this period. Yet it may well happen that a differential diagnosis

cannot be made. In this case the mixed specific treatment should be given *one* thorough trial. Should it fail, there should be no further effort in the direction of attempting cure by this treatment.

Where the diagnosis of parasyphilitic neurasthenia is firmly established, minute attention to general hygiene, a thorough hydrotherapy, especially with douches of brief duration, or warm-bath treatment, massage, and change of surroundings represent the best methods of ultimately accomplishing a cure. The only drug which is of the least service, aside from tonics and nutritives, is bromide of potassium; this sometimes relieves the headache.

A CASE OF COCAINE-POISONING.

By J. Nelson Teeter, M.D.,

Fourth Assistant Physician, Utica State Hospital, Utica, N. Y.

The patient, R. N., a man of moderate habits and apparently in perfect health, had been suffering from an ingrowing nail of the left great toe for some weeks, and came to me, requesting an operation. Cocaine hydrochlorate was chosen as a local anæsthetic, and, after a ligature had been tied about the base of the toe, 20 minims of a six-per-cent solution was injected at the matrix and along the left border of the nail. The operation was performed successfully, the patient reading a newspaper meanwhile and feeling no pain. Fifteen minutes after the application of the ligature it was removed and the slight bleeding that occurred was arrested, the wound dressed antiseptically, and a bandage applied. A few minutes later the patient complained of feeling faint, and upon closer examination I found the pupils extremely dilated, countenance pale and haggard, respiration increased in frequency, and the pulse thready and irregular, registering 160 beats to the minute. Patient was immediately placed in a recumbent posture, and 2 ounces of whiskey with 10 drops of aromatic spirits of ammonia were given, with but lit-

tle improvement following, and in a few minutes the dose was repeated, with the addition of 5 minims of the tincture of digitalis and a hypodermic injection of $\frac{1}{30}$ grain of strychnine sulphate. The pulse still remained very weak, and at one time was almost imperceptible. The great pallor continued, and the respirations were shallow, numbering 36 to the minute. Whiskey was repeated, and $\frac{1}{100}$ grain of nitro-glycerin was given. A few minutes later patient showed some improvement in colour, and pulse became 140, with a corresponding decrease in the respiration.

During the whole period patient retained complete consciousness, but was greatly impressed with the fear of impending death. He described a numb sensation that crept up from his feet to his legs and body, which seemed as if it were attacking his brain, and he felt that he could not live did he not exert his will to overcome this sinking into unconsciousness. He also experienced great oppression in respiration and constantly called for fresh air. No convulsions or convulsive twitchings occurred. After he recovered from the acute effects of the poison he was much exhausted, and for five or six hours was not able to move his extremities without excessive fatigue following. Insomnia was a marked feature the following night. The immediate effects of the poisoning lasted about one hour, but twelve hours passed before the patient entirely recovered. The quantity of cocaine administered was about one and two-fifths of a grain.

OPIUM-POISONING TREATED WITH POTASSIUM PERMANGANATE.

By Norton Downs, M.D., Germantown, Pa.

I desire to add some additional testimony to the mass of evidence that has accumulated of late as to the value of permanganate of potassium in opium-poisoning, especially after the drug or its alkaloids have been absorbed and are exerting their deadly influence upon the cerebral centres.

The case I am about to report presents in a striking manner the point in question.

I was recently summoned to see a man of thirty years of age, of marked mental attainments and perfect physical health, but who had been under great mental strain of late. I learned from him that three-quarters of an hour previous he had swallowed the contents of a vial of lead-water and laudanum.

A hasty examination showed that he was labouring under intense excitement; his pulse was 140 and very small, respiration slow, and the pupils somewhat contracted. He answered questions intelligently and with perfect frankness; he begged me not to give an emetic, and, in fact, declared that he would refuse to swallow one. But, fortunately, I had in my hypodermic case some apomorphine, and of course he made no objection to my giving him $\frac{1}{8}$ grain. The action of the drug was most satisfactory, and I could not but be astonished at the promptness with which the vomiting began, for in less than a minute from the injection of the drug he was beginning to relieve his stomach of what remained of the poison. This, as I had feared, proved to be but a small portion of the amount swallowed. He was much incensed at the trick that had been resorted to, and he thereupon flatly refused to assist me by swallowing water to wash out the stomach more completely.

Soon after the vomiting had ceased the effect of the opium became prominent, and he gradually sank into a state of almost complete coma, despite all the efforts to keep him awake, so that it was with great difficulty that he could be aroused to answer in monosyllables a question asked.

His pulse, which had previously been so rapid, doubtless due to the excitement incident to the fact of his having attempted to take his life, now became very slow,—from 36 to 44 to the minute. The respirations were shallow and about 8 to 10 per minute. The pupils, which were contracted

on my arrival, were now pin-point in character, and the case was certainly assuming a grave aspect.

The value of a hypodermic injection of permanganate of potassium came to my mind, and hurriedly getting a solution, I gave $\frac{1}{2}$ grain in the thigh, and repeated the dose a moment later.

The pain occasioned by the introduction of the drug was felt by the patient, causing him to draw away the leg, but he showed no further evidence of consciousness.

Now comes the interesting point to which I wish to call particular attention.

In less than fifteen minutes from the time the last hypodermic injection was given, from being in a condition of almost absolute coma, with pin-point pupils, a slow pulse, and infrequent respiration, he had entirely returned to consciousness. The pupils were dilated, the pulse about 100, and in a perfectly natural manner he was talking of the sensations through which he had passed, and his regret at my having given him relief.

The length of time elapsing from the taking of the laudanum—which I estimated at about 3 drachms—to the time he was given the permanganate of potassium, of which he received a grain, was about two and a half hours.

I remained with the patient for some time, and seeing that there was no returning drowsiness, departed, leaving instructions for future treatment.

On seeing him the following day, he reported having passed a comfortable night, without sleeping, but that his mind was constantly filled with pleasing dreams and pictures.

The result of this case was prompt and satisfactory. Even though he probably would have survived the ingestion of the 3 drachms of laudanum, his condition at the time the permanganate of potassium was given was so critical that we must, I think, give due credit to the drug which in such a striking manner demonstrated its power.

In the medical journals one has frequently been confronted of late with reports as to the value of permanganate of potassium in cases of opium-poisoning. Within the past week I have seen reported cases where its proper use secured almost miraculous results. Unfortunately, I have not the precise data with me, but one case was reported in a recent issue of the *New York Medical Journal* and the other in the *Therapeutic Gazette*. In both reports it was stated that the patients were completely narcotized, but that they returned to consciousness and the symptoms abated, shortly after the injection of the permanganate of potassium.

It is true that the case I have reported probably would have survived the ingestion of only 3 drachms of laudanum, but at the time I gave the hypodermic I was uncertain as to the quantity that had been taken, and the symptoms were of a grave character and warranted all the apprehension that was shown.

The permanganate almost immediately relieved a threatening coma, bringing the patient back to complete consciousness. I am so well satisfied in my own mind as to its great value that, should I be placed in a like situation again, the free use of permanganate would be the first means of treatment suggesting itself to me.

PERMANGANATE OF POTASSIUM AS AN ANTI- DOTE TO MORPHINE.

To the Editors of the *Therapeutic Gazette*.
DEAR SIRS:—Miss B. E. McC., aged thirty-five, born in America. On May 4, 1895, at six o'clock in the morning, she took 30 grains of the sulphate of morphine. At 7.30 a.m. I was called, and found her in the following condition:—

Every muscle was completely relaxed; the iris had contracted so as to give only a pin-point pupil; the extremities were cold and intensely cyanotic; there was a clammy perspiration, livid lips and cheeks, decidedly stertorous breathing, averaging five respirations per minute; pulse could scarcely be

detected. No vomiting had taken place, and, upon the whole, she gave the appearance of being entirely beyond hope of recovery.

The following is the treatment that was resorted to:—

First I injected $\frac{1}{2}$ grain of apomorphine at 7.35 a.m., and at 7.45 a.m., $\frac{1}{30}$ grain of nitro-glycerin. The apomorphine failed to cause emesis, but the nitro-glycerin acted nicely. At 7.50 a.m. I began injections of permanganate of potassium, .4 to .30 aq. dest., an average of 12 minims every ten to fifteen minutes. There was no use in trying to keep her awake or even arouse her. She lay in this condition until 11 a.m., when I was able to make her respond to her name. After the fourth injection of the permanganate she materially improved; respirations became more frequent, also very much deeper, the pulse grew stronger, and the cyanotic condition began to lessen.

By the time I had injected the ninth syringeful she was practically out of danger, and from then on she improved rapidly. Though the pupils did not respond to strong light until towards evening, yet complete sensation was restored by noon. All injections were made subcutaneously in the right and left forearm.

I did not attempt to give her any food until thirty-six hours after. Obtained a good movement from the bowels early the following morning by hydrarg. chlor. mite, 8 grains.

For a couple of days afterwards she had a peculiar flighty sensation and complained of feeling very dizzy.

The numerous injections (eighteen in all) caused more or less swelling of her arms, as well as discoloration, though no trouble resulted therefrom.

GEORGE F. SIKER, M.D.
Toledo, Ohio.

FEEDING BY THE RECTUM.

G. Singer (*Central. f. d. Ges. Therapie*, March, 1895) recalls that the clinical value of rectal nutrition was established by Voit, Bauer, Von Eichhorst, and others. Egg albu-

min, with or without preliminary peptonization, is absorbed and assimilated by the mucous membrane of the large intestine. For direct absorption, milk is well suited. According to some, egg albumin is best when first mixed with salt (one gramme to the egg), though Ewald attaches no value to it, thinking, as he does, that the peptonization is the most important. Better still is Huber's combination of the two methods: six eggs are mixed with six grammes of salt and two hundred cubic centimetres of a .15-per-cent. solution of HCL, containing five grammes of pepsin, and the mixture is kept for ten hours in the warm chamber. Of this mixture, nutrient enemata may be given twice daily. Rectal feeding is still insufficiently employed in practice, partly because it is sometimes disagreeable, partly also, perhaps, because this method of nutrition has not quite fulfilled the somewhat exaggerated expectations at first entertained of its utility. Singer thinks that after hemorrhage from a gastric ulcer rectal feeding should be resorted to for some days. It diminishes the likelihood of a recurrence of the hemorrhage by doing away with the irritation caused by the presence of food, and by giving the stomach physiological rest, with freedom from the peristalsis and hyperæmia accompanying digestion; it is at the same time a treatment for the troublesome vomiting of gastric ulcer, with or without hemorrhage. The nutrient enema should not consist of more than a quarter of a litre. Singer has practically kept to the mixture recommended by Boas, and uses one hundred and twenty-five grammes of milk, one hundred and twenty-five grammes of wine, the yolk of two eggs, mixed with a little salt and a teaspoonful of Witte's peptone; he sometimes adds a little grape-sugar. The mixture is well beaten up, and an ordinary enema syringe furnished with a soft tube is used to inject it. The nutrient enema may be given three or four times daily at intervals of four to five hours. The rectum must be cleaned out

with enemata before each nutrient enema is given, and neglect of this precaution is a common cause of symptoms of rectal irritation. Singer recommends after each nutrient enema the administration of a suppository containing $\frac{1}{100}$ grain of extract of opium; when there is great tendency to tenesmus, 8 to 10 drops of tincture of opium with the other ingredients of the enema. It is very seldom that the enemata are not retained, but in this case the preparation of the mixture may be at fault; there may be too much salt, or an unsuitable ready-made peptone preparation may have been used. The patients with hemorrhage from gastric ulcer were kept in bed and nourished solely by the rectum for from four to eight days. Singer says that recurrence of the hemorrhage took place only when patients secretly took solid food before they were allowed. When there is much pain, a mixture containing subnitrate of bismuth and chloroform can be given by the mouth. Excessive feeling of hunger and thirst can be treated by a little opium (better than cocaine) and two hundred cubic centimetres of water (for thirst), but if the thirst be excessive, owing to diarrhœa, more fluid may be given. Singer also recommends exclusive rectal feeding to be tried in some cases of dilatation of the stomach, in some of gastric neurosis, including excessive vomiting of pregnancy, and after some abdominal operations. In cases of typhoid fever he thinks that he has diminished the great loss of weight by feeding patients by the rectum in addition to the ordinary feeding by the mouth. Enemata containing alcohol and tea may be useful in collapse during acute diseases, and where alcohol cannot well be administered by the mouth.—*British Medical Journal*, April 13, 1895.

EFFECTS OF DOUBLE CASTRATION ON THE ENLARGED PROSTATE.

Mr. E. Hurry Fenwick, of London, believes that the operation of double castration, which Dr. J. W. White, of Philadel-

phia, has proposed for the shrinkage of the enlarged senile prostate, is a valuable and an important addition to the methods of treating the distressing sequelæ of this form of urinary obstruction, for, although his experience is limited to nine cases, yet he has seen sufficient improvement in these to induce him to recommend the operation for certain forms of the disease. He gathers that the profession at large is too sanguine as to the immediate benefit to be expected from the procedure, that too pronounced a relief is anticipated from it, and that it is regarded as a panacea for all stages of prostatic obstruction,—views which he regards as untenable. He suggests that those who record their experiences should be careful to recognize and to mention the character and size of the prostate *per rectum* and the length of its channel before and after the operation, for it is only upon accumulated reports of such data that we can be guided to the selection of that form of poststatic enlargement which is best suited for double castration. Accurate estimation of the character and size of the prostate is far from easy, and he is forced to believe that statements describing enormous prostates disappearing in three weeks after orchectomy spring from an erroneous appreciation of the size and shape of the gland. There is no doubt that slow shrinkage of the prostatic tissue, in many of the forms of senile enlarged prostate, ensues upon double castration. Further experience must, however, decide as to whether every form of prostatic growth is thus affected. It is certain that escape from catheter life after castration depends absolutely upon the health of the vesical muscle. The grade of the atony, therefore, should be most carefully estimated before any hopes of relief from catheterization are held out. To promise a confirmed catheter case that orchectomy will do away with the instrument will merely bring discredit on the operation and disappointment to the patient. Even after prostatectomy we are unable to

promise such relief if the muscle is hopelessly atonic, and we cannot do so after castration. It is possible that castration, by diminishing the microbic infection from the inflamed senile prostate, will remove a constant menace to the integrity of the kidneys, for it will control the most prolific source of ascending pyelitis.

In his opinion it will prove of value in the following conditions: 1. In reducing bulky outgrowth of the lateral lobes of the prostate. It may be found that the small, tough, fibrous, median or lateral vesical outgrowths will be better removed by suprapubic prostatectomy. 2. In controlling the distress and danger of an inflamed senile enlarged prostate. 3. In lessening the frequency or difficulty of introducing the catheter in advanced or confirmed catheter life. 4. In avoiding the mechanical difficulty of crushing a post-prostatic on a post-trigonal stone, by levelling the base of the bladder, thus rendering the operation of litholapaxy feasible in a condition in which before it was impracticable. 5. In reducing chronic cystitis and recurrent phosphatic calculus in cases of confirmed catheter life.—*British Medical Journal*.

THE TREATMENT OF COMA.

From *La Tribune Médicale*, the following treatment is taken:—

Coma following Affections of the Meninges and Brain.—1. Place patient in a well-aired room.

2. Friction the entire body with alcohol and water.

3. Apply sinapisms to the legs.

4. Apply four leeches to the mastoid region or bleed from the arms.

5. Give the following purgative enema:—

R Sodii sulphat., oz. i;

Sennæ fol., oz. ss;

Aquæ, ad f oz. viii.

M. et ft. infusio.

6. Practise rhythmical tractions of the tongue by the method of Laborde.

7. Feed patient with milk and bouillon, or, if deglutition is too difficult, give this nutritive enema :—

R Yellow of two eggs ;
Peptone (dry), oz. ss ;
Milk, f oz. viii.

Coma of Infection and Toxication.—1. Give every hour a subcutaneous injection alternately of ether and caffeine :—

R Caffeine, gr. xlv ;
Sodæ benzoat., oz. i ;
Aque bull., oz. iii ;
S.—Dose, m x.

2. Every four hours give a tablespoonful of the following :—

Acetate of ammonium, oz. ;
Tr. musk, gr. xv ;
Essence of mint, m iv ;
Tr. jalap, f oz. iss ;
Tr. gentian, q. s. ad. f oz. iv.

3. Provoke diuresis by large injections of cold water (a quart and a half).

4. If poisoning is indicated, give the special antidote required, and induce vomiting by the subcutaneous injection of apomorphine,—gr. 1/12.

Neurotic Coma.—Give the following enema :—

Tr. valerian, f oz. iss ;
Musk, gr. xv ;
Yellow of one egg ;
Water, f oz. i.

Compress the carotid arteries with the fingers. Practise the rhythmical traction of the tongue, and pass interrupted electrical currents through different parts of the body.

FOR NEURALGIA.

The following has been recommended :—

R Antipyrin.....dr. iss ;
Caffeine.....dr. ss ;
Ext. cannabis Ind, } āā...gr. iiss
Ext. aconite, }
Hyoscyami hydrobromat..gr. ½

M. et ft. caps. no. xxx. Sig.—One every two or three hours.

TREATMENT OF TIC DOULOUREUX.

M. Grandclement communicated a method of treating this affection from which he claimed excellent results. It consists in making subcutaneous injections of the following solution into the affected side of the face: Distilled water, 10 grammes (2½ fluidrachms); antipyrin, 4 grammes (1 drachm); hydrochlorate of cocaine, 0.03 gramme (½ grain). The face sometimes became much swollen, but soon resumed its normal appearance. One case in which he succeeded was that of a woman of 60 years who had suffered so much that she had decided a submit to resection of the trigeminal nerve. After thirty injections, made within a period of ten days, over all the painful points, the attacks ceased. A year later they recommenced, though with less severity, and the patient was about to undergo the same treatment when she died from some pulmonary affection. A second patient, who had also decided upon a surgical operation, was submitted to the injections and recovered. A relapse also occurred within one year, but yielded in two days to the same treatment. She had a second relapse in September, 1894, but this was also arrested by the injections in three days. Beyond the complication of œdema, M. Grandclement has seen no ill-effects, though he has made use of the solution a great many times.—*Universal Medical Journal.*

TREATMENT OF CHOLERA INFANTUM BY

LARGE DOSES OF WATER.

Jules Para reports (*Rev. Men. des Mal. de l'Enfance* :—*Amer. Jour. of Med. Sci.*) five cases of cholera infantum treated successfully in accordance with the plan of Luton, of Reims, and Remy, of Nancy. He believes that by this method almost all children affected while in good health may be saved, if seen by the physician sufficiently early. In accordance with Remy's method, in the beginning of the treatment, all food is

interdicted, this restriction to be maintained for a number of hours, according to the strength of the child and the intensity of the disease. Then, to answer the immediate indications, to calm thirst, cleanse the digestive tract of the poisonous substances which it contains, and to restore to the blood the liquid lost, and re-establish normal blood-pressure, water is prescribed. Plain water, however, is not suitable, nor is an acidulated solution. A feebly alkalized and sparkling water, like that of Soultz-matt or Vals, has proved most acceptable. At first, small doses are given, frequently repeated, as long as thirst is evident; and in this way, in hours, a quarter, half, or even an entire litre may be taken. When the gastric intolerance is extreme, the first doses are rejected; but this irritability will soon subside under persistent administration. The cry, which indicates the sufferings of the organism deprived of water, quickly ceases, and a period of quietude supervenes. Under the influences of the absorption of water into the blood the circulation is re-established and all the alarming symptoms subside. While, however, the child is thus saved from its impending peril, the success of the case naturally depends upon the subsequent treatment, which is carried out by the cautious administration of well diluted sterilized milk, increasing the strength of the mixture gradually until the pure milk can be borne.

THE CLINICAL USES OF APOMORPHINE.

In an extended article, J. Boyer and L. Guinard (*Bull. Génér. de Thérapeutique*, August 30, September 15 and 30, 1894) write of the physiological action and clinical uses of apomorphine. The authors state that the drug produces two kinds of physiological phenomena, one being characterized by *excitation*, in which spasms, trismus, convulsions, agitation, vertigo, and hyperæsthesia are observed; the other, by *depression*, in which there occur syncope, collapse,

hypothermia, general weakness, muscular paralysis, weakness and arrest of respiration, cardiac enfeeblement, and anæsthesia. These various phenomena are the result of the actions of two different kinds of drugs. The writers believe that the crystalline form of apomorphine causes exciting and convulsive phenomena, while the amorphous salts of the drug produce chiefly symptoms of stupor and paralysis. To obviate the production of diverse phenomena, and in order to obtain in the adult a simple and pure emetic effect, the white *crystalline hydrochlorate of apomorphine* should be employed in doses of from 3 to 5 milligrammes ($\frac{1}{10}$ to $\frac{1}{12}$ grain). The authors believe that, judging from the results of the principal researches so far published, and which they review in a careful and thorough manner, apomorphine is a medicament of real value. Its efficacy and the superiority of its action over other emetics have been established. The easy method for its administration by subcutaneous injections and the rapidity of its action make it an excellent therapeutic agent. If employed in a pure form, apomorphine will not cause serious after-effects.

A FATTENING FOOD.

Dr. T. Robinson states (*Lancet*) that with patients suffering from cold feet, physical and mental depression, exhausting headaches, aching of the nerve centres, indolence of the digestive, menstrual, and other functions, intolerance of physical exercise, and a subnormal temperature, he prescribes tonics and cod liver oil; but he frequently meets with considerable difficulty in getting his patients to take his remedies. They say that the oil makes them sick and the tonics irritate their stomachs. To overcome this difficulty, and to find a combination which would fulfil the indications for treatment, he suggests the following formula:—

Extract of Malt..... oz. iss;

Pancreatised Cod Liver Oil oz. j;
 Spirit of Chloroform..... oz. j;
 Oil of Cinnamon..... m vj;
 Water.....to oz. vj.

A tablespoonful to be taken three times a day after meals. This mixture is given as a food, and if persevered with will be found to be easily assimilated and to constitute a treatment of signal service.

THE TREATMENT OF SCIATICA BY NITRO-GLYCERIN.

La Médecine Moderne for January 23, 1895, states that nitro-glycerin is a valuable remedy in the treatment of sciatica. The dose which should be given is 1 drop of a one-per-cent. alcoholic solution three times a day, although larger doses than this may be needed.

Mikhalkine has reported three cases of rebellious sciatic neuralgia which were cured or much ameliorated by nitro-glycerin. In one case a patient aged forty-four years was attacked with violent pain in the sciatic nerve, extending from the trochanter to the malleolus. The pain was extremely severe and made sleep impossible. The attitude of the limb was characteristic. Salicylate of sodium, the bromide of sodium, antipyrin, acetanilide, and phenacetin with quinine were administered without effect, and the application of a blister to the painful point, along with a soothing ointment and massage, failed to do good. Even chloral at night gave the patient but temporary rest. The pain persisted for three weeks. The author then administered the following perscription :—

℞ Nitro-glycerin (one-per-cent solution),
 m iii to m xxx ?
 Tincture of capsicum, m xc ;
 Peppermint water, oz. iii ;

and gave of it 3 drops three times a day for three days, and after this 10 drops three times a day. After the medicine had been administered for two days, the patient had

a comfortable night and the pain was diminished. The amelioration of the symptoms progressed during fifteen days, the attacks of pain diminishing in intensity and the patient being able to walk readily. At the end of this time an attack of erysipelas with high temperature developed, which lasted for twelve days. During its presence the neuralgia disappeared, but returned with the fall of temperature and desquamation. Once more nitro-glycerin was administered, in the dose of 10 drops of the above prescription three times a day, and ten days later the patient left the hospital completely restored to health. There was not a great modification of the pulse produced by this dose, neither was there headache.

In another case this author treated a woman aged forty-five years, who had atheromatous blood-vessels and was very nervous, for sciatica of the right side, with which there was associated muscular atrophy and hyperæsthesia. After trying the bromide of potassium with galvanization and morphine, with an ointment of salicylic acid, without effect for five weeks, recourse was had to the nitro-glycerin mixture. After the patient had taken it for fifteen days an attack of malarial fever interrupted its administration and required the use of quinine. The excess of pain, however, forced a renewal of the treatment with the nitro-glycerin. After twelve days' more treatment the patient was able to walk without suffering from pain. For the purpose of calming the neurotic condition the following mixture was given :—

℞ Bromide of potassium ;
 Bromide of sodium ;
 Bromide of ammonium, of each, oz. i ;
 (Distilled water), oz. iiss.

A teaspoonful of this three times a day. A continuation of the nitro-glycerin mixture with this prescription entirely relieved this attack.

The third case was that of a man of forty years, who was brought into the hospital

suffering from an attack of fever and violent pain in the lower part of the right leg. There was a quickened pulse and marked tenderness of the limb on palpation. 30 grains of the salicylate of sodium and 20 drops of the tincture of valerian were given internally and a blister applied over the trochanter. While this reduced the fever, it did not relieve the pain, and four days later the nitro-glycerin mixture was given, in the dose of 5 drops three times a day, increased finally to four times a day. After eight days' treatment the symptoms ameliorated very much, and after six weeks the patient was entirely cured, there being no return of the trouble for six months after.

RARE FORM OF ANTIPYRIN RASH.

In *La Presse Médicale* of February 16 a rare eruption caused by antipyrin is recorded. The patient, aged thirty and very fat, was seized with violent, even unbearable, pains in the head while at his doctor's residence, for which 15 grains of antipyrin were given. His urine contained a little sugar (two hundred and twenty-five grains in the twenty-four hours) and traces of albumin. He also presented an old and obstinate psoriasis in the seborrhœic regions (scalp), scrotum, gluteal folds, palms of the hands, umbilicus, etc. Exactly four to five minutes after the ingestion of the remedy he was seized with tinglings over the whole body, then a desire to scratch himself. His face became red, his eyes filled with tears, a keen sensation of heat was experienced, his pulse noted 120 to 130 pulsations, at the same time red patches appeared on his neck, then on his back. On the morrow, after a sleepless night, there was the same febrile state, the same pruritus. The eruption at its height consisted of a collection of plaques of a bright, inflammatory redness, scattered at all points of the body, without special localizations, without marked symmetry. In general round in shape, these plaques were mostly of the

size of a five-franc piece. They formed a slight relief, and in their neighborhood the skin was perceptibly hotter. Taken between the finger and thumb, these lesions, in no way painful, gave the sensation of a pretty deep thickening of the skin; their evolution was rapid. On the second day after the febrile state had disappeared the itching diminished progressively, to disappear on the eighth day. Most of the plaques grew pale, became covered with slight scales, and disappeared in fifteen days. Some of the largest ones presented in their centre an epidermic upheaval (abortive bulla), and were a little longer in disappearing. The patient afterwards stated that years before a dose of antipyrin had given him similar trouble. The eruption described differed from a nodose polymorphous erythema in the abruptness of the onset, the tingling and pricking over the whole cutaneous surface, in the itching preceding the eruption, and in the eruptive elements being more numerous, less prominent, painless, and with rapid evolution.—*British Medical Journal*, March 9, 1895.

CHLOROFORM.

V. G. Stadnitzky (*Vratch*, No. 43, 1894) has carried out a series of elaborate experiments on seven healthy young men, in order to study the influence of chloroform, when administered internally, on the gastric functions. In each instance the experiment lasted fourteen days, being divided into two equally long stages, during the second of which the subject was given from 3 to 10 drops of the drug (with water) three times daily. The author's general conclusion is to the effect that CHCl_3 markedly improves all the functions of the stomach, which fact suggests that the drug might prove very valuable in the treatment of various gastric disturbances and, before all, in dyspepsia.—*British Medical Journal*, February 9, 1895.

THE TREATMENT OF HEMORRHAGIC METRITIS

BY SALOL AND ANTIPYRIN.

Bralant states that Labadie-Lagrave has resorted with success in certain cases of uterine hemorrhage to the employment of antipyrin. The difficulty is to carry the powdered antipyrin into the cavity of the uterus, and for this reason the idea arose that liquefied antipyrin when mixed with salol might prove useful as a hæmostatic and antiseptic. The method of application consists in placing equal quantities of salol and antipyrin in a tube, which is then held over an alcohol lamp. The mixture is speedily transformed into a clear liquid, which has a somewhat brownish tint. This liquid is solidified by cooling. It is passed into the uterine cavity by means of some absorbent cotton which is wet with the medicament. A vaginal tampon of absorbent cotton wet with creosoted glycerin is also introduced and the patient directed to rest quietly. This application does not cause pain and is exempt from danger. The hæmostatic action is rapid and complete, so that it is rare for a second application of the antipyrin and salol mixture to be necessary. The treatment is efficacious in nearly all forms of uterine hemorrhage, such as those due to fibro-myoma, fungous metritis, and similar conditions.—*Revue Internationale de Médecine et de Chirurgie Pratiques*. January 25, 1895.

MILK AS AN ELEMENT OF AN ASEPTIC DIETARY.

Drs. Gilbert and Dominici recently described before the Biological Society of Paris a series of experiments conducted upon dogs, rabbits, a man, and a woman, in which careful examinations were made of the intestinal contents and faecal matters, while under a milk dietary. The effect of the milk upon the development of microbes in the alimentary canal was determined by bacteriological examination of the faeces, as already stated. It was found that with

an exclusively milk diet the number of microbes diminished from the first day, and at the end of five days the number was found to be sixty-five times smaller than with an ordinary diet.

It is probable that the effect of milk in establishing intestinal asepsis is due, first, to the fact that it is so completely digested and absorbed, hence it leaves behind little food for bacteria; and secondly, to the development of lactic acid, which, as is well known, is very destructive to the bacillus coli, the dominant bacterium of the alimentary canal.

These experiments show very clearly the advantages to be derived from the use of milk in disorders of the liver and kidneys. In cases of diseases of the liver, this organ loses, to a large degree, its so-called antiseptic power, or its ability to destroy the toxins brought into it in the portal blood. The establishment of asepsis in the alimentary canal greatly lessens the amount of toxins produced, and thus relieves the liver in its work. In the same way the kidneys are relieved in nephritis. Milk acts as a natural diuretic, thus aiding the kidneys in their function.

CHLORIDE OF CALCIUM IN THE TREATMENT OF ACUTE PNEUMONIA.

Medical Chronicle, December, 1894.

In 1893 Dr. A. Crombie first called attention to the value of this drug in the treatment of pneumonia in a paper read before the Calcutta Medical Society, and in an article in *The Practitioner* of November, 1894, Dr. D. M. Moir reports cases treated by the same drug, apparently with much success. The remarkable features in the results are, the subsidence of the fever after two or three days' treatment to a practically normal point, notwithstanding the continuance of the physical signs; the singular freedom from the distress and anxiety often associated with high

temperatures; and, according to Dr. Crombie, an arrest of the disease in the stage in which it happened to be when the treatment was begun. Dr. Crombie thinks his results with calcium chloride closely resemble those obtained by the brothers Klemperer after use of the serum containing anti-pneumotoxin. He refers to the work of Green on the power of calcium salts in hastening the coagulation of blood, and the discovery of Pekelharing that peptones have a strong affinity for the calcium salts, and that the poisonous action of peptones, etc., is due to their removing from the tissues calcium salts, which are essential for nearly all the vital processes. He thinks it not impossible that the action of the chloride of calcium may consist in its neutralizing the toxic action of the peptones or albumoses circulating in the blood. He recommends that the chloride should be given in doses for adults ranging from five to fifteen grains every four hours.

SOLUTION OF ANTIPYRIN AS A HÆMOSTATIC.

Dr. Roswoll Park says (*Med. News.*) that during the winter of 1885 his attention was called to the efficiency of a solution of antipyrin as a hæmostatic. Carefully tested, he found that it also had distinct antiseptic properties, comparing favourably in this respect with most of the anilin derivatives in use. Experimenting with animals, he found that it could be used as an antiseptic styptic anywhere upon the bowel, the brain-surface, or elsewhere, causing no symptoms that made him regret its use. He now keeps always on hand a standard, sterilized, five-per-cent solution, using it as a spray, a compress, or an injection. While it has not sufficient power to contract vessels that spurt, it almost instantly blanches and checks oozing from any surface from which blood is escaping just fast enough to be an annoyance. Moreover, it is practically unirritating. Dr. Park says that he has never known harm to occur from its entrance into any part of the body where it was not called for. He also recommends the use of

the same solution in certain cases of inflammatory occlusion of the nose. To relieve the temporary smarting and irritation, a weak solution of cocaine may either be used a few minutes before the antipyrin, or the two may be combined. In certain acute catarrhal conditions of the upper air-passages and throat there is nothing which appears to him to give early relief more satisfactorily.

TREATMENT OF TONGUE TIE.

Dr. Chervin (Paris, 1894), the director of the Institute for the Treatment of Stammerers, at Paris, made an interesting study of the surgical aspect of frænum cutting. Much performed in certain regions of France, and formerly often done by some of the greatest surgeons, he thinks that its use has a very limited application; for example, in those rare cases where the tongue is bound down to the floor of the mouth by an inferior anchyloglossia, so that the tongue is immobilized. In certain cases where the frænum is too long, extending even to the tip of the tongue, excision is required. This is exceptionally necessary, and, though in itself insignificant, it may present serious danger in a little child. It is wrong to think that if an infant nurses badly its frænum must be cut. A little exercise upon the end of one's finger will correct this fault, and operative interference will be unrequired. Cutting the frænum is absolutely useless in correcting defective pronunciation, for this is only to be remedied by a methodical education of the voice by natural and rational exercises.—*Practitioner* June, 1895.

ASAFCETIDA IN OBSTETRICAL AND GYNÆCOLOGICAL PRACTICE.

Warman (*Therapeutische Monatshefte*, January, 1895), after calling attention to the inefficiency of the remedies commonly employed in the treatment of abortion, warmly commends asafetida. Morphine in his hands has not proved satisfactory,

Small doses frequently fail and large doses are in themselves dangerous. The results are quite otherwise with asafetida. He usually gives it in the form of pills, each containing $1\frac{1}{2}$ grains; sometimes an enema of the tincture properly diluted gave better results. This drug promptly arrests hemorrhage, though bleeding may recur later on. Even when the hemorrhage is severe and alarming, the first dose acts as a sedative and allows a gradual separation of the ovule without uterine contractions. Several striking cases are cited, particularly some of successive operations. Pills are administered, beginning with two a day, the dose increasing to ten a day, this quantity being gradually diminished. No disagreeable symptoms were observed, and the results were most gratifying.

ACUTE CORYZA.

Abortive treatment: Pure carbolic acid, ammonia, each 5 grammes ($1\frac{1}{4}$ fluidrachms); alcohol (90 per cent.), 10 grammes ($2\frac{1}{2}$ fluidrachms); distilled water, 15 grammes ($3\frac{1}{2}$ fluidrachms.) Pour 10 drops on blotting-paper every hour and inhale for several seconds. This is a modification of Brandt's formula. *Abortive powder:* Cocaine hydrochlorate, 0.50 gramme ($7\frac{1}{2}$ grains); menthol, 0.25 gramme (4 grains); salol, 5 grammes ($1\frac{1}{4}$ drachms); boric acid, 15 grammes ($3\frac{1}{2}$ drachms). Use hourly as a snuff. Internally give tincture of belladonna and alcoholic extract of fresh aconite-root, equal parts, 30 drops, in two doses. To cause perspiration, vapour-bath. *Palliative treatment:* To restore nasal permeability, boiled solution of cocaine hydrochlorate, 1 to 100, lukewarm; or, if there is an idiosyncrasy to cocaine, spray of pure olive-oil, 20 grammes (5 fluidrachms); menthol, 1 gramme ($15\frac{1}{2}$ grains). To relieve trigeminal neuralgia, chill, and lassitude: quinine hydrochlorate, 0.25 gramme (4 grains); antipyrin, 0.50 gramme ($7\frac{1}{2}$ grains). (Marcel Lermoyez, *Jour. des Praticiens*, January 26, 1895.)

TREATMENT OF BUBOES.

A practical method of securing compression in the treatment of buboes is recommended by Neebe (*Monatshefte für. Prakt. Dermatologie*, May 15, 1895). He uses a ball of wool half again as large as a man's fist, which he places over the enlarged gland and binds in place by a firmly applied spica of the groin. To avoid slipping from its proper position, a few large safety-pins are placed in the bandage and through a part of the ball of wool.

The author has employed this method for two years in buboes of all sizes, and reports but one case of pus formation.

THE TRANSMISSION OF MORPHINE FROM THE MATERNAL TO THE FETAL CIRCULATION.

At a recent meeting of the Paris Obstetrical and Gynecological Society, as we learn from a report of the proceedings published in the *Mercredi Medical*, Dr. Bureau mentioned the case of a woman who, having been addicted to the use of morphine for about seven years, had got to the point of taking fifteen grains a day when she was delivered of a child. When the umbilical cord was cut Dr. Bureau caught the blood that escaped from the umbilical vessels and the placenta, and on chemical analysis it was found to contain morphine. The effect of the drug on the child, if there was any, is not mentioned.—*N. Y. M. J.*

TREATMENT OF WARTS.

Kaposi (*Medical Week*, February 8, 1895) recommends the following mixture in the treatment of warts:—

R Sublimed sulphur, f. dr. iiss;
Glycerin, f. dr. viiss;
Pure acetic acid, f. dr. iss. M.

This mixture is applied once a day to the regions covered with warts, and the growths shrivel up and ultimately disappear.

Sudden and profuse discharge of a large amount of serum from the abdomen after colotomy is a sign that some part of the

wound has given way, and should lead to immediate removal of the dressings for inspection. If hernia be found, it is an easy matter to reduce it, and a stitch or two in the wound will keep it reduced.

DEPILATORY FOR SURGICAL OPERATION.

To remove hair from scalp, peri-anal, or scrotal region, without using razor, cut hair off with scissors, then apply paste made of sulphohydrate of calcium, mixed with a little water. Make layer one millimetre thick. No pain or erythema. In less than ten minutes hair can be rubbed or washed off, to grow again in several days.—*Med. Mod.—Clin. Jour.*

HÆMOPTYSIS.

Calcium chloride (the pure crystallized salt), 10 to 15 grains (0.65 to 1 gramme) every two hours, in *glycerin*, simple elixir and water, or in infusion of *gentian*, 10 grains (0.65 gramme) to the teaspoonful. Reduce frequency of dose as improvement takes place. (S. Solis-Cohen, *Philadel. phia Polyclinic*, January 19, 1895.)

CHLOASMA.

Try the following for moth patches (so called):—

R Ammonium chloride, 1 drachm.
Acid hydrochloric, 1½ drachms.
Glycerin, 7 drachms.
Tincture benzoin, 2½ drachms.
Rose-water, 3 ounces.

Mix, shake well. Apply night and morning with a brush or feather.

LAVERANEA LINHÆMICA.*

By T. V. CORONADO, M.D., CUBA.
Translated by L. F. ALVAREZ, M.D.,
Hawaiian Islands.

The competitors for the Orfila prize were required to answer the following question: "Are there in the air, the water

* Extract of a paper by Dr. T. V. Coronado, of Cuba, sent to the Academy of Medicine, of Paris, to compete for the Orfila prize of 1894. The author received from that learned body the *encouragement* of 1,000 francs.

or the soil, bodies, either of animated nature or purely chemical, apt to develop malarial diseases (*l'impaludisme*), when by ordinary or experimental means they are introduced into the animal economy?"

The discovery of Laveran has been confirmed in nearly all the countries of the world; the micro-photographs showing positively the morphological identity of the different forms of evolution of the parasite of malaria in every country. This discovery has stood criticism for thirteen years and needs no further discussion. Of 752 cases of malarial diseases, whose blood was examined by Dr. Coronado, the parasites were found in 613 and would probably have been found in all if the search for them had been methodically repeated.

Continued efforts to cultivate the parasites in the different substances employed for this purpose in bacteriology gave negative results. According to Prof. Duclaux plants cannot reproduce themselves in sterilized soil. A series of experiments were made to cultivate the hematozoa of Laveran in infusoria, but these parasites, which thrive so well in marshy soil, will not grow when transplanted in the same ground after it has been sterilized.

During the rainy season four test tubes were filled, one-third with mud and two-thirds with water, from a swamp decidedly malarious. These tubes were plugged with sterilized cotton and examined at frequent intervals. They were found to contain a large number of micro-organisms, some of a beautiful colour, but no hematozoa of Laveran were found. A drop of blood taken from a patient with malarial fever was added to tubes 1 and 2, while tubes 3 and 4 were kept to control the experiments. In 24 hours slight opalescence was observed in tubes 1 and 2, and microscopic examination, with eye-piece 3 and objective 7 (Leitz), showed a conglomeration of very small, lively organisms endowed with linear and rotary motion. Their size

was two mills of a millimeter in length by one in width. They had no colour, being completely transparent. If examined when they are not in motion they appear to be of oval form with a constriction in the middle as if they had been twisted on their minor axis.

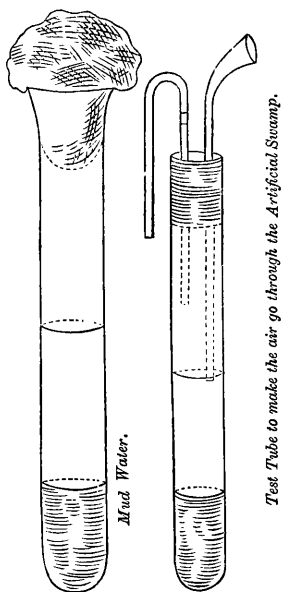
On the following day the opacity of the water was more pronounced, and a light pellicle with some yellowish points appeared on the surface. The microscope revealed that this pellicle was formed by an entangled mass of vegetation of a beautiful amber-yellow colour, containing in its meshes very many organisms identical to those observed on the previous day, but appearing slightly larger and showing one or two dark granulations in their interior. Further observation on the same day revealed the fact that some organisms had assumed a rounded or spherical shape, measuring from three to six mills of a millimeter, showing numerous dark granulations in the centre and were endowed with lively movements. A few flagellated spheres, such as are found in the blood of patients with malaria, could now be seen. When the cultivations were 8 to 12 days old the flagellated spheres had increased in size and numbers, 40 or 50 could be seen in the field, and they reached a maximum diameter of 12 mills of a millimeter and the length of the flagella varied from 15 to 30 mills of a millimeter. The organisms could not be found in the control tubes 3 and 4, and the author could not doubt that he had succeeded in cultivating the true flagellated bodies of Laveran.

A drop of water with a bubble of air enclosed in an excavated slide affords ample opportunity to observe the evolution of these organisms. In a few days the granulations gather at any point of the surface as if to form a nucleus, the flagella detach themselves and the organs are destroyed. The great majority of the spheres presented a single flagellum, but some had two or even

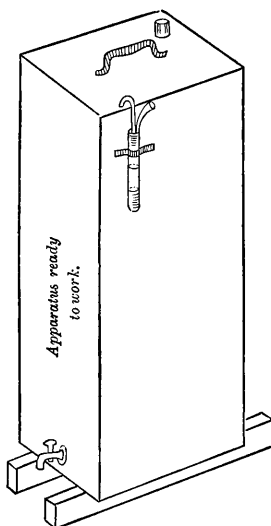
three. These flagella reproduce the spheres in a few days.

Repeated observations demonstrated that the flagellated spheres of Laveran are not found in the streams in the rainy season, but are very abundant during the dry season when the water is low or stagnant, and they were never found in the highlands of Cuba, where malaria is unknown. The plowing of new ground in a plantation caused an epidemic of malarial fever, and the examination of the soil revealed the presence of the spheres of Laveran. Many experiments demonstrated the existence of these parasites in stagnant water, mud and dry soil of malarious localities, and by means of the following experiments the night air of malarious regions was also found to contain these organisms.

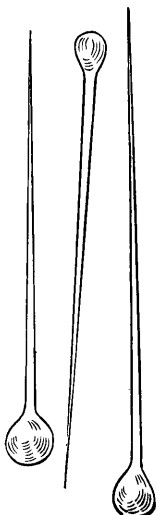
Artificial Swamp.



Test Tube to make the air go through the Artificial Swamp.



Small Balloons to obtain blood from patients with malaria.



Take a test tube partially filled with mud and water and keep it under observation several days. If the water remains clear and repeated examinations prove the absence of the parasites of Laveran, adjust a cork with two perforations to allow the passage of two tubes, one ending externally in a bell-shape similar to the ventilators in steamers, the internal or inferior end penetrating one or two millimeters in the water of the test tube. The other tube simply passes through the cork, the other end serving to establish communication by means of a rubber tube with the upper and interior part of a water container of 18 to 20 litre of capacity. This water container must be provided with a faucet at low level so as to allow the water to run out slowly, thus creating a vacuum at its upper and interior part which will be filled with air passing through the water, or artificial swamp, prepared in the test tube. The spheres of Laveran which the air may contain will be kept in the test tube.

The author had a faucet attached to an empty petroleum tin which served him as a water container. He fastened the test tube to the side of the petroleum tin with adhesive plaster. The end of the rubber tube, which establishes communication between the test tube and the interior of the petroleum tin, may be attached to the spout or to a small tube soldered to the upper part of the petroleum container.

Another simple method of demonstrating the presence of the hematozoa of Laveran in the air consists of ordinary or excavated slides with a drop of glycerine or vaseline and methyl blue exposed to the night air at different heights of a wooden frame fixed in a malarious locality. By placing a glass cover over the drop these slides are ready for microscopical examination with a power of 700 to 800 diameters.

The author concludes there are in the air, in the water and in the soil bodies of animated nature apt to develop malarial diseases when ingested with contaminated water or

food, or when moist air is inhaled containing them.

The word *linhemica* or *limnhemica*, the author states, is derived from *linné* (lagoon) and *aima* (blood).

A PERFECTLY ASEPTIC DRAINAGE-TUBE.

By J. H. Kellogg, M.D.

Notwithstanding the long and unsuccessful search that has been made by ovariologists for an aseptic drainage-tube, or an aseptic method for managing the drainage-tube, the writer believes that he has solved the problem at last; and incredible though it may seem to the reader, he will certainly be convinced of the correctness of this assertion after reading the following description of a device which simplifies to the last degree the care of the drainage-tube, and at the same time renders it absolutely aseptic.

From experiments made a number of years ago I became convinced that the principal cause of infection from the drainage-tube was the sucking down into the tube of germ-infected air by means of the evacuating syringe. Other causes are possible, such as the gradual extension of growths of the *staphylococcus pyogenes aureus* and *albus*, and other germs along the outer or inner surface of the drainage-tube, thereby carrying infection from the surface to the deeper parts. By thorough asepsis and antisepsis in the treatment of the wound, however, the last-named causes may be eliminated, and many operators have succeeded in thoroughly eliminating this source of wound infection, but have still found it impossible in many cases to leave a drainage-tube *in situ* for more than a few hours without infecting the abdominal cavity, thus occasioning great inconvenience and suffering to the patient, as well as anxiety to the nurse.

How the abdominal cavity becomes infected in pumping out the fluid from the abdomen by means of the evacuating

syringe, will be readily apparent if we conceive a glass bottle made to represent the abdominal cavity, the water in the flask representing the fluid to be drawn out. If an ordinary abdominal drainage-tube were passed through the cork placed in the mouth of the flask, and through this a quantity of fluid were drawn with an ordinary glass syringe such as is used in evacuating fluid from the drainage-tube, it would be noticed, that while water is passing up into the syringe, air is bubbling up from the lower end of the drainage-tube into the bottle. To any one who will give the matter a moment's thought, it will be apparent that it is impossible to get any considerable amount of fluid out of the flask without admitting an equal quantity of air to take the space of the fluid withdrawn.

If it is suggested that the flask does not really represent the abdomen, since its walls are rigid, while those of the abdominal cavity are flexible, and that the intra-abdominal pressure will be sufficient to diminish the size of the abdominal cavity while the fluid is withdrawn, rendering unnecessary the entrance of air in the evacuation of fluid through the drainage-tube in the ordinary way, it is only necessary to call attention to the fact that while the drainage-tube is in place, the abdominal cavity is open and consequently intra-abdominal pressure is abolished. I had an opportunity recently to test the truth of this statement by attaching a manometer to my drainage-tube while *in situ*, and was surprised to find that the abdominal pressure was almost nothing, being only sufficient to sustain a water column of one or two inches. With each movement of the diaphragm the fluid in the drainage-tube plays up and down, the amount of oscillation depending upon the force of the diaphragmatic movements. So long as the intra-abdominal pressure exists the fluid is forced out through the drainage-tube, but the fact that the abdominal

cavity cannot empty itself completely of fluid is recognized by every surgeon who uses an evacuating syringe. As is well known, it is often possible to draw a number of ounces of fluid from the drainage-tube. It must be remembered that whenever fluid has been withdrawn, an equal quantity of air has been introduced into the abdominal cavity. In using the evacuating syringe, one can withdraw, without admitting air, only the small quantity of fluid which is in the drainage-tube itself.

As soon as the level of the fluid reaches the bottom of the tube or the first lateral opening, air begins to pass out into the abdominal cavity, more fluid pours into the lower end of the tube, and this process continues until all the fluid within reach of the end of the tube is evacuated. The bubbling which occurs while the fluid is being withdrawn affords an evidence of the correctness of this explanation.

From these facts it is readily apparent that the only thing necessary for absolute

asepsis in the care of the drainage-tube, when the tube itself is clean and the wound and dressings perfectly aseptic, is to so arrange as to admit only sterilized air to the abdominal cavity. This the writer has for several years accomplished by means of a specially constructed drainage-tube, shown in Fig. 1, C. By means of this tube it is possible to evacuate the fluid from the abdominal cavity in the usual way without contamination of the wound, since all the air passes down through the evacuating tube, and is filtered before it enters the abdominal cavity. For evidence that this arrangement is practically as well as theoretically germ proof, so to speak, I connected

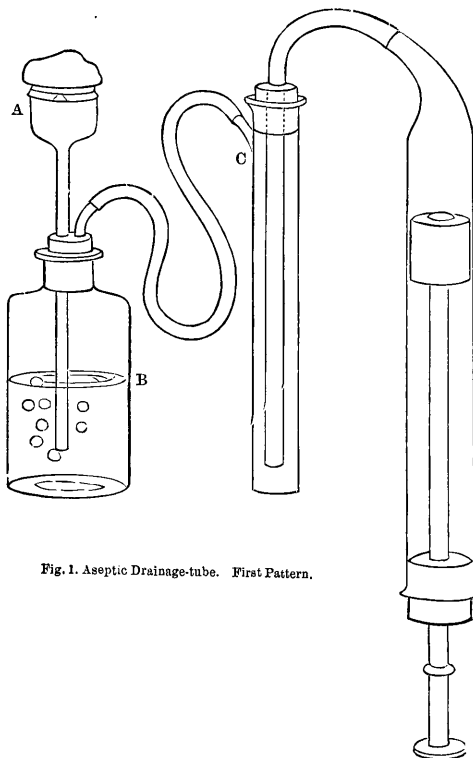


Fig. 1. Aseptic Drainage-tube. First Pattern.

it with a glass flask, after having first placed in the flask a quantity of sterilized bouillon. I then pumped air through the bouillon in the flask for one or two minutes regularly every day. No infection occurred for two weeks, when, by clumsy manipulation, the cork became loosened and unfiltered air was admitted to the flask, the contents of which were the next day found to be turbid. This experiment demonstrated both the utility of the method of drainage suggested and the method by which abdominal wounds become infected through the evacuating syringe, even when the greatest possible care is taken with the dressing.

By a recent device (Fig. 2) I have been able to simplify the arrangement above described. The device consists of a plug embodying the two-way principle above described, and which can be fitted to any drainage tube of sufficient size. The device is fitted to the medium-size aluminum tube, the bore of which is made smooth and true at the upper end so as to make an air-tight connexion with the plug. Filtration of the air is effected by connecting with the lateral opening of the plug a small funnel filled with absorbent cotton and covered with sheet lint. It is better, of course, to have drainage-tubes of the exact size required to fit the plug, but in case a larger tube is used, or one which is not perfectly true, the plug can be made to fit by simply stretching over it a bit of rubber tubing, or by winding around it a strip of rubber dam.

In the employment of this drainage-tube most scrupulous attention must, of course, be given to asepsis in the dressing and care of the wound, so that infection may not occur from any other source, and the plug and rubber tubes connected with it must be kept thoroughly aseptic. In the intervals between use, the plug and connecting tubes must be kept submerged in a ten-per-cent solution of carbolic acid, being rinsed in distilled water just before using. The

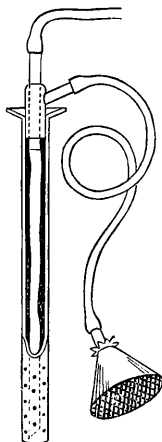


Fig. 2. Aseptic Drainage-tube
Improved Pattern.

the frequently resulting erythema and other inconveniences of iodoform.

Complicated as this description may seem the device itself is so simple that no more time is taken and no more difficulty is experienced in its use than in the use of the ordinary evacuating syringe, and one may feel, in its employment, absolutely sure that the abdominal cavity is being kept free from infection, providing, of course, that other necessary precautions are taken.

The device which I have described is a most convenient means for washing out the abdominal cavity when this is necessary, as it occasionally is, subsequent to closure at the operation. For this purpose it is only necessary to remove the filtering funnel by disconnecting it from the plug to which the funnel is attached, substituting a tube of proper length, the other end of which is made to dip into a solution of boracic acid, or whatever antiseptic solution may be employed. It is, of course, necessary to fill the tube with water before connecting it with the plug, so that any unsterilized air which the tube might contain will not be drawn into the abdominal cavity.

wound should be dressed with iodoform gauze, or, as I prefer, with gauze made of a powder consisting of the following mixture:--
Camphor and Carbolic acid, a 1 part.

Boracic acid, 12-16 parts.

This powder answers well the purpose of an intestinal antiseptic, being free from any unpleasant odour and

To persons familiar with bacteriological manipulations it will at once appear that the whole principle involved in this drainage-tube is simply that concerned in the handling of aseptic fluids in bacteriological manipulations. The plug, as well as the aluminum drainage-tube to which it is fitted, is made by Wm. H. Armstrong & Co., of Indianapolis, Ind.

A NEW MOUTH GAG.
By Louis Bors, M.D.,
Budapest, Hungary.

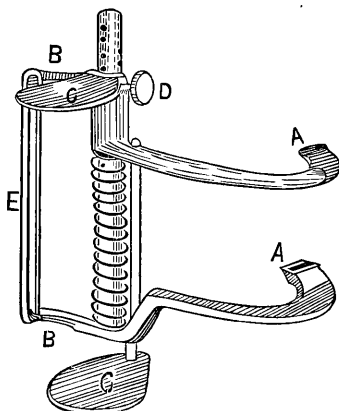
The advantages derived from this instrument are the following :—

1. The gag can be placed in the mouth without the use of a spoon.
2. The mouth is under the full control of the operator, who can open or close it at will.
3. The gag is self-retaining, and therefore no assistant is needed.
4. It can be taken apart quickly and easily, and can therefore be thoroughly disinfected.

The instrument is composed of two steel plates, A B, A B; two connecting rods with two round plates, C, C; and a spiral spring between the two plates, around the upright (thicker) rod. The gag can be used on either side, but must be turned over.

It is manipulated as follows : The thumb and forefinger of each hand are pressed on the plates A A and B B, thus closing the instrument, [which is then ready for introduction. It can then be forced between the teeth, when, by pressure on the round plates, C C, the mouth can be opened at the will of the operator. On the upper round plate is a screw, D, which regulates the opening of the plates A A. The rubber band E, which is fastened at B B, can now be drawn over the ear. The more the patient bites on the plates A A, the firmer will the gag maintain its position.

The instrument is made by the well-known firm of Tiemann & Co.



Evangelistic.

THE MEDICAL ARM OF THE MISSIONARY SERVICE.

BY DR. H. D. PORTER, OF NORTH CHINA.

"The medical work is the divinely appointed substitute for miracles.

"There is a sense, of course, in which we may use the word miracle with reference to all missionary work. The changes which have come through the Gospel in the course of its wide proclamation are sometimes considered miraculous. As the exponent of the work of the Holy Spirit they are indeed marvellous. But these changes are the natural and determined results of the unfolding of God's grace to men. I do not consider it legitimate to call them miraculous. On the other hand, the medical appeal is to the same pitiful need of men. It is so direct and immediate that the dullest can appreciate and rejoice in it. The appeal is personal, and carries with it, as did the early miracles, its own demonstration, which neither the recipients of the aid nor their friends desire to gainsay, if they are able to.

"(1.) The medical work is a fitting substitute for miracle in the range of its influence. 'The multitudes' are aroused by it. In our own station during the ten years or twelve since medical work has been carried on we have reached directly and personally 100,000 persons. The direct influence is beyond our ability to estimate. In China alone there have been reached annually now for many years a multitude approaching half a million each year.

"The first recorded miracle of the Saviour, which was a work of healing, was wrought upon the son of a nobleman. The first raising of the dead was the ruler's daughter. 'And the fame thereof went abroad into all the land.' The most immovable class was thus affected, as well as the 'multitude,' who always received and heard gladly. The work of the medical missionary has had a like fame, sudden and widespread. At Tientsin, within a stone's throw from our own mission compound, three great hospitals are carrying on their beneficent work. The first was established in 1880, for men, in the grounds of the London Mission, a splendid building upon the busy thoroughfare bearing a constant testimony to the messages of the Gospel. The second is upon the other side of the same street, a few hundred yards away, established for women and children. The third is nearly opposite the original one, with its noble front upon the same street. Close beside these a fourth is in quiet operation, and adjoining the third one mentioned there are now being erected a vast series of buildings, for the purpose of equipping the Chinese army and navy with

suitably educated and furnished medical men. This remarkable series of benevolences has sprung from the partial healing by missionary physicians, one a man and the other a woman, of the wife of a nobleman. A Christian native physician has been for many months the chief reliance of the imperial court at Peking, when serious and alarming disease has attacked the members of the imperial family.

“(2.) The medical work is the fitting substitute for miracle in the self-conscious ability of the physician to give the needed relief. I once attended, with another member of the profession, an old gentleman who had accumulated very large wealth, and was duly respected for his great business capacity and general ability. No man in this generation has been more respected in that community than he. He had a hopeless disease. He had called in no less than 100 native doctors. A single examination showed the source of the trouble. Surgical relief could give a temporary respite from pain and death. The confidence with which the advice was given was marvellous to those whose dependence had always been conjecture in place of clear and exact knowledge.

“(3.) The medical work is the substitute for miracle in the marvellous relief or cure which is effected through either surgical or medical skill. Our native helpers, after seeing the many interesting cases which come to the hospital go away with very great improvement, say in a humorous way: ‘The deaf hear, the lame walk, the blind see.’ They cannot say, ‘The lepers are cleansed, and the dead are raised.’ But every other form of malady and ill may be successfully reached. Nothing appeals more directly to sense of wonder and grateful acknowledgment of ability than the cure of the apparently hopelessly blind. We have a good woman who acts as the very efficient matron of our hospital. It is now some four years since she came some hundred miles or more, a poor blind beggar, led by a little son. She was in good estate as an inn-keeper until she became blind from cataract. Hearing of the work, and dragging herself painfully along till she reached us, she sought for the help the fame of which had reached her. The eyes were duly operated on. One was gone too far for help; but the other was easily cured by the operation and care. The marvellous result was enough to give an increasing fame to the hospital work in the region she came from. The cases where both eyes are thus enlightened and healed are very numerous now. The splendid courage of the man who in absolute confidence begotten of superior knowledge cuts off a man’s leg to save his life, and who returns the patient to his friends healed and strong, makes a tremendous impression upon an ignorant and suspicious people. When such serene confidence is repeated unceasingly through a series of years, through a multitude of appalling cases of disease, the appeal is closely allied to that appeal which the Saviour made in His

marvellous works of touching and healing. The Chinese are forward in admitting the skill and power of Western physicians. They catch men. But the fish generally just nibble at the bait and pass on. They know that it tastes good, but that is all. But what can the single-handed medical missionary with his overwhelming work, do more than this?

"Our patients, as patients, are not always very easy to deal with on account of their crass ignorance and superstition. A man came to me with an inflamed knee joint. I arranged a splint for it, did everything else that I could think of, and hoped for a brilliant result. But, when I went next morning into the ward, lo and behold! my man's bed was empty. 'Where is he?' 'Gone away.' 'Why is that?' 'He sent to the idol temple to make enquiries, and found that his stay here would be unlucky and displeasing to the gods, so he went.' One form of making enquiry is to take two wooden blocks and let them fall. According to the way in which they fall, the answer is 'Yes' or 'No.'

"A little old woman came to me one day who did not present a very pleasing appearance. Her eye was swollen up. I wondered whether her eyeball was injured, and did what I could temporarily, pending a fuller examination. Meanwhile my wife gave her a cup of tea and some bread and butter, all of which she disposed of, though she had never seen bread and butter before, or had milk and sugar in her tea. The visit over, she went away and told the neighbours, 'They gave me medicine at the dispensary to make my head dizzy, and then the foreign teacher took my eye out.' The next day she came back to us, this time with her brother, a barber, who was greatly enraged with us for having excised his sister's eye. The swelling having by this time somewhat abated, I was able to open the eyelids and show the brother that the eye was there all right enough, whereupon the old lady went back to her neighbours and informed them, 'My brother went with me to the foreign teacher and threatened him, and frightened him so much that he put my eye back again.'

"The Fuh-ning Hospital was once a tea warehouse. It has a courtyard with wooden pillars covered with crimson scrolls. On one the Ten Commandments are written, on another is the Lord's Prayer. A platform is placed here, and here also are some bamboo chairs. All looks very nice and bright; and, indeed, rather gorgeous; and this is our Church. This is the rest-house, too, where people turn in and put down their burdens for awhile, drink tea and listen to whatever the catechist has to say. For a catechist is always to be found in that courtyard, preaching the Gospel and talking with those who want to know more of the doctrine. 'Tell us as simply as you can,' the people will say, 'for we are very ignorant and know nothing.'

"Our wards open off this courtyard. Very simply arranged and furnished they are, with tiled floors, trestles for beds and lumps of firewood for

pillows. But it is the best that we can do, and the people are satisfied. I have six students whom I train. They help me in the hospital and go on to the charge of branch dispensaries, under my superintendence, outside.

"A gong sounds at six, and patients throng to the dispensary, each of them carrying a little bowl. This is for their physic. We have to take care only to give them a dose at a time, or they would drink it all up at once. They are excellent takers of medicine. Castor oil is swallowed to the last drop without a wry face, and pills they will eat if you do not look after them. Amongst the crowd as the morning went on, you may see a well-dressed student, dressing some loathsome ulcer. Three or four years ago this student shrank sensitively from everything that was repulsive; but one day he chanced to read about our Lord washing His disciples' feet, and from that day no service has been too mean for him to perform for any one of the patients. The ulcer cases he has made his special charge; so much so, that I have to take him off them at times and give them to a junior student; for he is now one of our seniors. There are as good Christians amongst my students as there are in this hall. It is well worth all the trouble it has given me to have had the joy of training such men. It is well worth your while, any of you Christian parents who may be here, to train up your children to such work—to set medical missions before your boys and girls, and to put them in the way of preparing for the service. We must have missionary parents if we are to hope to have missionary children.

"You spend a great deal of time in doctoring," say some who think that preaching is the great thing for the heathen world, and that doctoring is secular, or at best but a means to an end. We reply, 'So did Christ.' A servant is not greater than His Lord, and our Lord spent a great deal of time in doctoring. His every act of healing being an outward expression of His Divine Compassion for souls. Deeds speak to the heart sometimes as much as words, and one word often as much as a set conversation, and we are not left without seeing the fruit of our labours. 'We have heard of God,' a patient will say, 'now teach us to pray to Him.' Oh the opportunities that are thus afforded the medical missionary amongst the hundreds and thousands with whom he has to deal! 'The harvest truly is plenteous!' That would be a matter for satisfaction if, ah, if the labourers were many. 'Pray ye, therefore, the Lord of the harvest, that He would send forth labourers into His harvest.'"

—"*Medical Missions at Home and Abroad.*"



IN THE WOMAN'S WARD.

Miss Morrill reports an excellent work going forward in connexion with Dr. Noble's dispensary at Pao-ting-fu. Several instances are narrated, showing how prejudices are overcome and permanent impressions have been made through this medical work. Miss Morrill says:—

"The woman's waiting-room is just crowded these days, and I have some very pleasant times with the women. The other day an old woman, after listening quite earnestly, said: 'I am seventy-one years old. Does all my incense-burning count for nothing?' I said: 'Yes; those are men's ways, but the Lord wants you to learn His ways.' She watched me keenly, and again burst out with 'Who told you to come here and tell us these things?' I answered her, and then said: 'Has not Buddha told you to find some other woman and bring her to his temple?' 'He is only an image!' she answered quickly; 'a mud thing! How could he?' 'Your god must be alive!'"

A. B. M. Report.

NORTH CHINA MISSION.

HOW PHOTOGRAPHS PREACH.

Dr. Peck, of Pang-chuang, sends an account of some good results secured through the use of his "Kodak" among the Chinese:—

"I find it a great wonder and interest to the Chinese. Upon the breaking up of our schools here, before the Chinese New Year, I presented a nicely mounted picture of their schoolmates to each boy and girl; these, carried into the various villages where their homes are, were the object of a great deal more wonder and curiosity than you could imagine such simple things could be. Especially was this the case with the group of Miss Wyckoff's school-girls, all of whom have unbound feet. This innovation when only supported by, perhaps, one example in a village, becomes much more impressive when a group of twenty or thirty of them are shown together.

"I had a very entertaining talk with one of our good Christian men from a village twenty miles away the other day. He had a daughter here in school, and when he took her home and had this picture to show he had crowds of visitors. His is the only Christian family in the village of 1,200 families—an unusually large one; and heretofore they all have held aloof, each one afraid to break the ice and even make inquiry about this new way.

But now the attraction was irresistible, and every day he had a crowd of visitors, and their numbers gave them courage. The women were decorously put in the rooms and the men kept in the courtyard, and the wonders of the simple photographs were never exhausted. 'How is it possible to put so many pictures on to the paper and have each one a perfect likeness?' The father had to describe graphically how it was done; but what delighted him most was that it was an introduction to the presentation of the Gospel story. Taking his stand in the doorway so that the women on the inside and the men on the outside could all hear, he would talk for hours on a stretch, and so great was the interest that if a child cried in the room the mother would be told to hush it up quick, as they could not hear the speaker; and if a man or boy made a noise moving about or going out, he would be reprimanded by the crowd. No opposition was manifested, and the good fellow came back to Dr. Porter's station class perfectly radiant and hardly able to speak aloud."—*A. B. M. Report.*

In the last number of *Woman's Work in the Far East* Mrs. Joseland has a short article on Dr. Fahmy's new hospital at Chiang-chiu. We extract the following: "The greater number of our patients are heathen, who have never heard the name of Jesus. Sometimes we come across an especially bright woman, who has to come for several weeks in succession, and we are able to interest her and make her long to hear more of the Saviour. I remember a case last year of a woman who came bringing her little girl, who was suffering from dropsy. She was obliged to come several weeks in succession, and seemed glad to hear all we had to tell her. She was visited in her home, and has now been to one of our mission chapels several times . . . One little girl about five years' old, suffering from hip-disease caused by a blow from her own mother, was lying on her back more than five weeks. We gave her bright pictures and taught her some little hymns . . . Our Churches gain much from the work of the hospitals, and without it hundreds would never hear the name of Jesus, or know of a Saviour who died for them. This year we have a matron, who lives in the hospital. She is a good, earnest Christian woman, and we hope will do much to help her poor suffering sisters."

We have been favoured with a private copy of the Report of Dr. Peck's work at the Williams' Hospital, Pang-chuang, of the A. B. C. F. M. The writing of this Report, which is so interesting that we cannot but regret that Dr. Peck does not more frequently contribute to our columns, must have entailed much trouble for "not having a complete mimeograph at hand, the stencils for this work were made by writing with a style on sand paper." We wish the doctor

had told us more of the evangelistic work and its results, but the following is interesting: "This curtailment of our work at the station we have tried to balance by extension of itinerant medical work on a larger scale than we have hitherto attempted; two of our trained assistants have been sent, as they could be spared from the hospital, to various of our out-stations with medicines and a few surgical instruments for the performance of simple operations; the statistics of those thus treated are incorporated in the general tables. Professionally there is much about this kind of practice that is unsatisfactory, but it is doing the best we can for the people. Preaching and healing have gone together in these missions to out-stations as they do in our hospital waiting room, but these without the presence of a foreigner, and a general note of enthusiasm has come from places when this double work has been done.

So many have been attracted to listen with interest to the Gospel message that we plan to keep as many of our hospital staff as can be spared in this itinerating work, especially at such seasons as patients are fewer in the hospital."

Speaking of the Red Cross Society, which Dr. Peck suggested we should ally ourselves with, he writes:—

"The events of this war, then unforeseen, have emphasized the need in China of a Red Cross Society. If it is not feasible for our medical missionary society to stand in any official or auxiliary relation to the International Society of the Red Cross, each of the hundred or more mission hospitals in China will still uphold in its vicinage its own standard of the Cross, trusting that, if it be in the divine providence that this nation remain a united people, our efforts may be hastening the day of its regeneration."

The following, though not strictly evangelistic, very powerfully illustrates the degraded superstitions of this people, opens up a vista of the power of evil and emphasizes the need for the Gospel of Liberty.

"Of the curiosities of native practice will note but one case, a very chronic and inveterate psoriasis in a man of middle age, doctored for years without benefit, at last told by a priest, who was also a doctor, that he could not be cured unless some one would consent to die for him; the matter was presented to the family, but no one came forward with any alacrity; the general sentiment seemed to be that he could be spared himself as well as anyone. Priest at last suggested that a beast might do as a vicarious sacrifice. So a donkey was killed, and the man, stripped naked, was wrapped with ceremony in the fresh hide. But as he ruefully said when he came to me, he only lost a good donkey for nothing."

From the Wesleyan Mission Hospital at Hankow we have two items of cheering news. A brother had been disciplined for over twelve months for

having a pai-wei put up in his house, and refusing to take it down. The opposer was his son. A few days ago, on the visit of the pastor, the man expressed penitence, and as practical proof pulled down the shrine, singing the doxology to God. The explanation is that the said son had been in the Hankow hospital and come under the influence of the Gospel; he stood by whilst the destruction went on, and concurred in it. In another case a scholar, and a censor of his village, had been bitterly opposed to our work. Not long ago, in a quarrel with another man, he received a severe bite on one of his thumbs. His friends, who were members of the Church, brought him after some long interval to the Hankow Hospital, where it was necessary to amputate the digit. He was for some time an inmate of the Hospital, was faithfully dealt with as to his soul, and has so far come near the kingdom that the other day he invited the foreign pastor to a feast in his house and joined in prayer at its close. We pray that this lion may become a lamb, and the persecutor a preacher of the Cross.

BREVIA THEOLOGICA.

How rarely does one find a European writer who has no personal acquaintance with China, or the Chinese language, giving anything like an accurate estimate of Chinese ideas on religion or any other subject. It is hardly possible to read a leading article, or even a paragraph of news from China, in a home paper without noting some more or less ludicrous error concerning things Chinese. Not a few writers who refer to Chinese ethics speak as if the Sermon on the Mount was almost a superfluous addition to the Four Books; yet others seem to think that the Chinese sages have said nothing worthy of being classed as ethical. One of the choicest Hulsean Essays—that which won the prize in 1869 and was published under the title of “The Light of the World” by A. S. Wilkins—had for its subject “The Distinctive Features of Christian as compared with Pagan Ethics;” it devotes one page out of two hundred to China, and remarks that “it will perhaps be enough to dismiss the subject [of Chinese Ethics] with two quotations.” One of these is from the *Westminster Review*, announcing that “the precepts of Confucius are perfectly childish in comparison of Greek ethics,” and the other is from a German work on Christian Ethics, which attributes the gloomy severity of the Chinese (!) to their “petrified morality.”

It is positively refreshing to turn from such writers to one who stands out as an exception to the general rule—the present Bishop of Durham, Dr. Westcott. In quite a number of his works there is some interesting reference to, or apt quotation from, the Chinese Classics or the Tao-teh-king. He has quite recently given two very able critiques of the Confucian and Taoist writings—one in the article which he contributed to the Cambridge “Companion,” the other in “The Gospel of Life.” Chapter 5 of this latter book is entitled “Præ-Christian Gentile Solutions of the Problems of Being.” It divides the “præ-Christian Book-religions” into three main divisions, viz., (i) The Religions of China, (ii) Religions of India, (iii) Zoroastrianism. The following is the author’s own summary of the first of these three:—

“(i) The Religions of China.

(a.) *The Primitive Religion.*

Imperial worship and worship of ancestors.

(b.) *Taoism.*

Conceptions of Tào.

Corruption of Taoism.

(c.) *Confucianism.*

Basis of Confucianism.

Filial Piety.

Relation to Old Religion.

Retribution on Earth.

Strength and Weakness of Confucianism.

Importance of the Primitive Religion of China."

Order is the stamp impressed on the Chinese religions (*nature* on the Aryan and *history* on the Shemitic). "With Lao-tzü the order—the 'way' Tao—pointed to absolute repose . . . with Confucius the visible order was the one sufficient sphere of the citizen's activity . . . In both cases the order which the teacher aimed at realising was something sovereign over the mutability of physical nature and life. Both teachers again regarded the earth as the one scene of human interest. Both wished for a return to the old paths. Both found their golden age in the past. Evil without and within was treated by them as something transitory and removable. Neither looked to any future existence as an occasion for just retribution; nor do they offer any direct doctrine on another state . . .

(a.) All that is properly speaking theological in the national Chinese religion is older than [Confucius and Lao-tzü]; this primitive religion . . . has no priesthood, no mythology. The sacrifices which are offered represent dependence on the power to which they are made and gratitude for protection, but they include no thought of expiation or propitiation; and no essentially evil powers whose malevolence needs to be averted are recognised in this earlier faith. A fellowship between heaven and earth is established through the spirits of the departed, which are placed in close connexion with the celestial hosts in the most solemn acts of worship."

Two ceremonial institutions based upon these early beliefs, "the imperial worship of Shang-ti and the general worship of ancestors, present most impressively, and as it were under the form of a primæval tradition, two conceptions which as yet we have not mastered in their Christian fulfilment, the solidarity and the continuity of the race. The Chinese are commonly held to be a prosaic people. They have at least preserved in these national customs a vivid expression of the most far-reaching fellowship of men in the present and through all time. In the one the nation is gathered up and finds unity in its head, and so appears before its unseen Lord: in the other the family is realised as one through all the stages of succession; and few thoughts are grander than that which holds that the achievements of a great man extend the privileges of his nobility to his ancestors (comp. Luke i, 72). It is no doubt true that the practical effects of these venerable observances fall far below their true conception . . . Still the institutions themselves have a meaning for us. They come to us as a message from a patriarchal age, declaring what man reaches out to and what by himself he cannot obtain. As we look on them with true human sympathy we seem to see a dim shadow of Melchizedek moving among his people."

(b.) Taoism. In the estimate made of both Taoism and Confucianism the Bishop has evidently relied on Dr. Legge's trustworthy contributions to the "Sacred Books of the East Series," viz., vol. iii, "The Shû-king, The Religious Portions of the Shih-king and the Hsiâo-king;" vol. xvi, "The Yî king;" vols. xxvii and xxviii, "The Lî-kî;"* vols. xxxix and xl, "The Texts of Taoism."

Of Taoism he says: "Such a system [as that contained in the Tao-teh-king] contained no Gospel for the poor . . . at present Taoism is in China the most debased type of religion." "The book of rewards and punishments,' a collection of moral aphorisms of great beauty, is said to be at present the most popular religious book in China."

(c.) Confucianism. "The system of Confucius is the most complete expression of the national character. Confucius is the only statesman who has fashioned a 'religion'; and he sought it in the establishment of an earthly order. He declined to entertain the questions, Whence? whither?"

With regard to the "Lî-kî" Dr. Westcott says: "It is easy to disparage the observances as simply formal and external, but they witness to the intimate relation of the outward to the inward, and foreshadow in some sense the sacramental aspects of the world and life which Christianity has revealed." *Analects* xvii, 11, is quoted to show that Confucius looked beyond the impressions of sense.

"The history of China is the best comment on the strength and on the weakness of this most wonderful system of secularism leavened by the remains of a patriarchal faith. The empire has been at once the most lasting in the world and the most unprogressive. It has been lasting because it was the resolute expression of faith in a supreme and beneficent order . . . It has been unprogressive because Confucianism obscured the fact of sin and substituted a morality for a theology, rules for a divine fellowship, obedience to a code for devotion to a living Lord, teaching for a Teacher—as many at the present day seem to believe that the Sermon on the Mount can take the place of the Risen Christ—and adopted a type of order which was earthly and human, of the world and not above it. In China we see realised the effects of an absolute law, obeyed apart from reference to an absolute Law-giver, of a personal moral discipline ruled by the motive of self-regarding culture and not of self-sacrifice. China has been able to conquer its conquerors, but not to inspire them; to make them like itself, but not to call out the fulness of their life. The Chinese became what we may suppose the Jews would have become, if the covenant with Abraham had not underlain the Law."

"But not to close with the sad side of the picture, we may remember . . . that Confucius acknowledged the relation of Fatherhood as the basis of human

[* N. B.—The "k" is an italicised one in the original].

life. So far he was on the way to hear the fulness of the divine message to humanity . . . We can see that the revelation of a true Divine Father in the Mission of Christ completes what he began, and that his view of society illustrates the doctrine of the Fatherhood of God and of the brotherhood of man . . . There is nothing which gave strength to China which does not find a fitting place in the Apostolic doctrine, while the Christian Faith guards against the evils which weakened the Empire."

G. G. W.



Correspondence.

LONDON MISSION,
Hongkong, 1st Nov., 1895.

DEAR DR. HODGE:

My tenure of the office of Secretary of the China Medical Missionary Association is so much of a burlesque that I have decided to resign it.

All my efforts to obtain a copy of the Journal containing the constitution and rules have failed, and without a complete set of the "Journal" I cannot even render the small service of making out a roll, which you suggested would be advisable.

Anything pertaining to the office, moreover, such as notices, etc., must inevitably pass through the editor's hands, and it seems to me that it would not in the slightest increase the responsibility or work of the latter, as things are at present, to conjoin the offices. I would suggest that either this should be done, or that someone in your immediate neighbourhood should be appointed, with whom it might be possible for you to consult, and who might be of some practical assistance to you.

Work I do not shirk, and I shall at any time be willing to render you what help may be in my power, but I must ask you to announce my resignation of an office which, at this distance from the editor, I feel to be so much worse than a sinecure.

I shall return by parcel post at the same time as this letter the books and papers you forwarded to me.

With kind regards,

I am,

Yours very truly,

JOHN C. THOMSON.

[Dr. Thomson is in error in some of his statements; whatever it may seem

to him it certainly would increase both the responsibility and work of the editor to conjoin the offices: we speak with some considerable knowledge of both posts.—ED.]

DO THE NINETEENTH CENTURY MEDICAL MISSIONS FULFILL THE NEW TESTAMENT IDEAL?

To the Editor of

"THE MEDICAL MISSIONARY JOURNAL."

DEAR DR. HODGE:

Many I am sure have felt disappointed that the interesting paper by the Rev. D. Hill (published in the June number) has not been discussed by any one in the September number. Mr. Hill asks a question which every medical missionary must feel to be a very practical and a very important one; and although nowhere in his paper does Mr. Hill say in so many words, "No, the nineteenth century medical missions do not fulfill the New Testament ideal," yet one cannot help feeling that this is the conclusion to which he is unwillingly forced—our medical missions are not on New Testament lines. If this be really so then so much the worse for nineteenth century medical missions, and for us who are medical missionaries. Mr. Hill compares and contrasts the medical missions of the first century with those of the nineteenth under three heads—methods, object and results.

I. Taking first the methods. Here there can be no question; our methods are not the same. But are they therefore necessarily less divine? I do not think so. The Christian doctor, to my mind, is as truly a servant of

the most high, as the prophets and apostles were of old; his Master is the Great Physician, and the symptoms and signs of ordinary language are to him the whispers of the Great Teacher. These he sometimes catches, sometimes hears but faintly, and at other times misses altogether. We are skilful physicians just in proportion to the extent to which we are able to hear and carry out God's commands. When we take charge of a case it is true we take hold of the helm, but our Captain is on the bridge and our eyes are towards Him. That this method is abused, and that often we give not God the glory is no argument against the method. Under this heading I only wish to point out that the healing is as much *Divine healing* in the present day as it was in New Testament times. As to the impression produced that will come under another heading.

II. The object. These acts of healing were meant to be a revelation, "a revelation of the wisdom, the love and the power of God." That is certainly the aim every medical missionary ought to have in view, and is, I believe, the aim of all medical missionaries, however short we may sometimes fall below it. Our object is not to demonstrate the superiority of Western science, and the idea of dazzling on-lookers by our surgical ability has probably never entered the heads of the majority of medical missionaries. Once only have I heard of an operation done before a company of mandarins, who had been invited to be present, and the idea is so repugnant to the ordinary surgeon, savouring so much of the advertizing quack, that I believe it will be a long time before I hear of another display of the same kind. In that single instance it was done by a surgeon, whose name stands high on the list of medical missionaries, and it must have been from a strong sense of the importance of influencing those mandarins in favour of something higher than Western science that led him to depart so far

from the usual custom of medical men.

III. To come now to the third point—results. Were the New Testament acts of healing better adapted to reveal the wisdom, the power and the love of God than the acts of healing of present day medical missionaries? In other words, was the effect on the minds of the Jews and Gentiles of the first century so much more spiritual than the effect on the minds of the Chinese or any other non-Christian nation of the present day? At first sight there seems to be only one answer. Certainly there can be no question about it. But on more closely examining the subject I doubt if we can affirm this so unhesitatingly. Let us take the Lystran miracle. The people saw a wonderful cure performed; they regarded the persons who performed this wonderful cure as gods, and would have worshipped them. A little later their minds having been poisoned by lying reports they stoned the chief actor and drew him out of the city, supposing him to be dead. Is not this very much the same kind of effect we sometimes see produced in China when a new city has been opened up by medical work. The priceless value of the miracle as a direct revelation to the Lyconians of God's power, wisdom and love, is not apparent on the surface, for they seem to have only been able to see the human instruments, whom they first treated as gods and then as impostors, and this in spite of Paul's clear declaration as to who they were and what their work was. I am now speaking of the impression made on the people generally, and I am not forgetting that there must have been some who saw with other eyes, and who understood and believed Paul's words, for we read that "they" (*i.e.*, the apostles) "returned again to Lystra . . . confirming the souls of the disciples," and we praise God that the same result is produced now-a-days, and there are those who are struck with the fact that our work is

of God and who give God the glory. I will just give one instance, which I do with all the more pleasure, inasmuch as the case occurred in connexion with the mission of which Mr. Hill is the beloved superintendent. A Chinese gentleman, who had been a District Magistrate and had also served as an officer in the Franco-Chinese war, came to the Wesleyan Mission to be cured of the opium habit. He was about to return to his father's home in Szchuen, but he did not dare to cross the threshold of his father's house as long as he was an opium smoker. He had been smoking for over twenty years, and although lately he had made more than one attempt to break off, he had not been able to do so. The minister in charge of the station told him that while the doctor could help him by giving medicine, there were two things more important than medicine. In the first place he must be in earnest about the matter, and secondly and more important still he must seek help from God. That evening the minister and the doctor visited Mr. S. in his Kung-kwan. After the customary cups of tea had been brought in, Mr. S. called a servant and told him to bring his opium pipe and a cleaver. When he had brought these, the servant was told to split the pipe up, which he did, after hesitating and looking longingly at the pipe several times, probably making a mental calculation as to how much he could sell it for. Then the three stood around a table, and the minister prayed that God would give Mr. S. the needed strength to break the chain which had bound him for so many years, and Mr. S.'s hearty yes, yes, after each sentence, made those who listened feel that his heart was in the prayer. For ten days he suffered from great weakness, and for two or three days he could scarcely stand. His wife and two daughters seeing his distress urged him to take just a little opium, but he was kept firm, and on the tenth day the victory was won. When he listened

to the preaching and was told his state before God, he was greatly offended, but before the week was over he felt that the minister's words were true. By and bye he came to see that he must choose between official life and Christ, and he chose Christ. Whether he has kept to his decision or not I do not know, as he has not been heard from since he left for Szchuen. Just before he started to visit his father he gave ten dollars to the Church. He was asked if half of this sum was not intended for the doctor. No, he replied, I want to thank God now. I will thank the doctor when I return from Szchuen. Here then is at least one case where potent medicines were used, and where watchful care was necessary for days, but Mr. S.'s reply is sufficient to show that these were not the things he saw, but God who was above and in it all. I do not say that this is a typical case; ten were cured, and we cannot say anything like this about the nine, but so it was also in our Saviour's time.

Skillful treatment of disease, the use of potent drugs, watchful care for days and weeks, need not hide one ray of divine glory. Nay more I verily believe that the opportunities for revealing God's wisdom and love are greater in curing a cripple to-day than they were when Paul miraculously healed the cripple at Lystra. For one thing the people see that what we give costs us something, and that it seems to me is a distinct advantage. The Lyconians saw the cripple cured by a word, a word which apparently cost nobody anything.

True there is the same tendency now-a-days to give the glory to the human instrument, but we can and ought to meet that just as Paul met it.

We must all feel deeply indebted to Mr. Hill for turning our attention to this subject and for reminding us of the high ideal set before us in the New Testament, but to say that present day medical missions are on an

altogether different plane from those of the first century, is surely not the best way to help us to realize that high ideal.

Let us believe that our medical missions are on the same spiritual plane as those of the first century, and though our methods are different our aim is the same, and our methods are calculated to produce the same results.

I am, etc.,

M. B.

PHILANDER SMITH MEMORIAL
HOSPITAL,

Nanking, Nov. 28th, 1895.

DEAR DR. HODGE :

Please allow me to make a suggestion through the Journal on the subject of Medical Education. When we look over the list of medical missionaries in China and consider that nearly all of these, besides their regular work, are teaching medical students, each having a class numbering from one to a dozen or even more, we realize that the foreign trained native practitioner is an element worthy of our most thoughtful consideration.

Already these young medicos are flitting from their nests and finding homes outside the fields where they were fledged. They carry with them a recommendation, or certificate of proficiency, or perhaps a diploma, from the physician or hospital or school that gave them a training. In the mind of the medical missionary to whom they come, however, there is a wondering query as to their real proficiency. To be sure a

young man's teacher may be a very well qualified man and have a wide reputation for success in his profession yet we know that among good men there is a wide difference of view as to what is essential and what is non-essential, and that there is a great difference in attention to details and the standard for attainment. In short we have no standard by which we can estimate the young man's ability. We must learn by experience.

Now I recognize that this, under any circumstances, must be, to a certain extent, unavoidable, but if all were required to pass before a Board of Examiners, in a known course of study, one element of uncertainty would be removed. And this brings me to my suggestion. The Medical Missionary Association should arrange a course of study for medical students, fix the standard of requirements and appoint a Board of Examiners, who would meet once a year at some central point and examine all applicants for its diploma. The advantages accruing to the profession and to the students themselves are obvious. A diploma issued from such source would be of great value to its possessor, for it would give a professional standing to one who had proved able to secure it. The plan would raise the standard and promote uniformity of medical education. It would give an incentive to every medical student to do his best and give him an opportunity to secure the best and most practical recognition of his merits. What think you? Is not the scheme practicable?

Very sincerely yours,

ROBERT BEEBE.

Medical Missionary Association Museum.

DEAR DOCTOR BOONE :

Herewith I send you a classified list of the *Pathological Specimens* in the *Museum*.

The two or three Physiological Specimens I hardly thought worth mentioning. This is the best classification I can make with the information at hand, and whilst it may not be very scientific I trust it will be serviceable. Will you make such additions to the article as you deem best, and send same to the proper parties?

Very truly yours,

WM. L. LUDLOW.

Monday evening, Nov. 25th, 1895.

LIST OF PATHOLOGICAL SPECIMENS PREPARED BY THE LATE DR. R. A. JAMIESON, PURCHASED FOR THE MEDICAL MISSIONARY ASSOCIATION MUSEUM.

PATHOLOGICAL.

Pulmonary :—

Tuberculosis, General.
Phthisis, Chronic.
Abscess (Tubercular).
Phthisis, General.
Abscess, Metastatic, from Acute Dysentery.

Hepatic and Renal :—

4 specimens of Abscess, Hepatic, resulting from Dysentery.
Bright's, Chronic, Liver and Kidney.
Alcoholism, Liver and Kidney.
Granular Contracting Kidney.
Hepatic Cancer.
Kidney, Cystic Degeneration from Enteric Fever.

Vascular :—

Aneurism, Aorta (Abdom.) 15 years' standing.
Aneurism, Aorta (Thoracic).
Aneurism of Heart, showing dilatation of Inter-auricular Septum.
Calcification of Aortic Valve.

Gastric and Intestinal :—

6 specimens of Diseased Mucous Membrane from various parts of Intestinal Canal, resulting from Enteric Fever.
3 of Dysentery, showing condition of Ileo Caecal Valve.
2 Cancer of Pylorus.
2 Cholera.
Stricture Descending Colon.

Tumours :—

Sarcoma { Humerus.
 { Periosteal and Endosteal.
 { Syphilitic.
 { Parotid.
 { Melanotic (Primary).
Lymphoma of Neck.
Cystoma of Lower Jaw.
Fibroma of Ulnar Side of Hand.
Carcinoma of Prepuce.
 { Male Breast.
 { Floor of Mouth.
 { Lower Jaw.
3 { (Scirrhus) Breast.
Cystic, Multilocular.
2 Epithelioma of Penis.
Lipoma, Left Spermatic Cord.
Adenoma, Breast.
Epithelioma, Lower End Rectum.

Genito-Urinary :—

Bladder, showing effects of strong Argentic Nitrate injections for Cystitis.
Clitoris, Hypertrophy of.
Scrotum, Elephantiasis.
Ovaries { Pyo-salpinx.
 { Hydrohæmopyo-salpinx.

Notes and Items.

The following graduation address at the University of Pennsylvania has been forwarded to us. The writer is a missionary volunteer. We trust there are many others like him. There are one or two slight inaccuracies, such as, "wherever new stations are to be occupied the medical missionary *must* (sic) lead the way," and the subject of the address is but lightly touched on in this short paper. It, however, so rings with the true missionary note that we are glad to publish it for an encouragement to ourselves, to remind us of many in the profession at home who are preparing to spend and be spent in this blessed service.

The True Dignity of the Medical Profession.

In the medical profession in the United States there are at present about one hundred thousand practitioners. Some have entered the ranks in a mad chase after the almighty dollar; some would gain the applause of men for skill in medicine and surgery, or for bringing to light some important mystery; some, in search for truth, are labouring to advance the cause of medical science; some, whose noble hearts overflow with love, are "moved with compassion" toward helpless and suffering humanity; some who realize that the body is the abiding place and instrument of the mind and soul seek to keep it "swept and garnished;" while still others, through the kindly relief of suffering, aim to swing open the door of the heart to the Great Physician.

To gain great wealth, to have great honour, to advance the cause of science, or to relieve much suffering, may be the happy result of faithful service, but to render the body most useful

to the mind and soul, and to lead the soul by means of the body to its Maker, is a prize which shines with more attractive lustre than all others. This is the highest aim; in this consists the true dignity of the medical profession, inasmuch as the soul is greater than the body or mind, and eternal interests are more important than temporal.

There is an extensive and inviting field for the exercise of this motive in the home land, but to the medical missionary, in whom the true dignity of the Christian medical profession finds its most apparent expression, the foreign field is incomparably greater and more fruitful. What then is the mission of the medical missionary? He is both a pioneer and an evangelist. That he is a pioneer is seen in the opening up of the different countries.

Dr. Asahel Grant, armed with his needle and lancet, forced mountain passes in Persia which the sword could never penetrate, winning his way to the homes and hearts of the ferocious Nestorian warriors.

Dr. Mackenzie, with two others, was enabled to raise from a bed of serious illness Lady Li, the wife of his Excellency Li Hung-chang, and as a result the Chinese built and finely equipped a commodious hospital for him in Tientsin and granted perfect freedom to the preaching of the Gospel.

Time forbids us to illustrate further, but this pioneer agency which has proved so valuable in the past is still needed. May we not expect that the "great closed land" of Thibet will be unlocked by the medical missionary? Sixteen hundred and fifty of the two thousand islands of the Pacific have never been entered by missionaries. Remember too the millions of our suffering sisters in the Zenanas

and harems of the East. Here, it is true, only lady physicians can gain entrance, but by helping hands and kind words they are able to win their hearts and lead them to the One who suffered and died for their salvation. To-day, even in the old missionary fields, wherever new stations are to be occupied the medical missionary must lead the way.

But why has this agency such great power? First, because the medical missionary gains the sympathy of the people by alleviating their suffering. In heathen lands ignorance and prejudice reign supreme. Every householder is at liberty to throw any kind of abominable refuse into the public street before his own door. When epidemics rage they seek to propitiate the evil spirits by organizing gaudy processions, while the germs of the pestilence are breeding in the streets through which they parade. Heathen doctors know nothing of the cause and cure of disease, but attribute all to the influence of spirits. Investigation even is precluded, lest they incur the anger of the gods. Their doctors treat injury with wanton cruelty, resort to charms and to spirits that "peep and mutter", and administer the vilest decoctions. Is it any wonder then that the medical missionary, when he is able to restore some loved one, or to remove great pain and suffering, gains the gratitude of the people?

Not only does the medical missionary gain sympathy, but he also destroys superstition. The people are taught by object lessons the true cause and cure of disease. They come to see the mockery of their own rites and ceremonies, and are ready to accept something better. Thus by gaining sympathy and breaking down superstition the medical missionary is able to do pioneer work.

But he is more than a pioneer. The missionaries themselves are often many miles distant from medical aid, but if a medical missionary is near he is often able to bring joy and

peace to their homes, save many days of sickness, and sometimes avert an untimely death. He is thus a power to increase the efficiency of the evangelistic force.

But the medical missionary has a direct evangelistic work to perform. He is to lead his patients by direct personal work to a knowledge of the Saviour. This is his chief aim; all is subordinate to this, and in as far as he has failed in giving this the pre-eminence, just so far has he failed in fulfilling his mission. As he opens the eyes of the blind he must direct them to the Cross; as he relieves others of burdensome tumours he must tell them of relief from heavier burdens; as he comforts others in suffering and heals their diseases he must tell them of Him who is able to carry their sorrows and heal their sin-sick souls.

My brother, my sister, the opportunity is grand! The needs and claims are appalling! Only one medical missionary to every two and one half million of heathen. Four thousand physicians to the same number in this country. But let us always remember that the medical missionary goes to carry the Gospel. To the cry for help that rises with resistless appeal to the Christian heart, from millions of down-trodden, suffering, lost, human souls, there can be but one sufficient answer: "Education cannot compass it; civilization cannot effect it; science says, 'It is not in me'; Philosophy says, 'It is not with me'; History says, 'I have heard the fame thereof with mine ears'; but it is Christ alone who says, "Come unto me".

CHAS. H. LYON,
Wooster, Ohio.

THE RED CROSS HOSPITAL.

When the United Presbyterian missionaries in Manchuria were obliged to leave their stations in the interior, they came to Newchwang, and Dr. Christie soon established a Red Cross Hospital

at that port. This was in December last, and the hospital was soon filled with soldiers who were wounded at the battle of Chin-chow. Dr. Christie, writing to *The Missionary Record of the United Presbyterian Church*, speaks of one of the most deplorable features of the war that practically no provision was made for the wounded by the Chinese military authorities; there were neither ambulance corps nor medical officers. This Red Cross Hospital was therefore welcomed as a great boon. Dr. Christie writes: "The news of the opening of our hospital spread rapidly through the army, and the early cases who were discharged cured did much to establish the confidence of the soldiers in foreign treatment. The proportion of wounded who came under our care increased with each battle, and it was very pleasing to observe that after the last serious fight which took place before the Japanese took possession of the port, the Chinese officers in command promptly sent the wounded direct to us." Later on other inns were rented, and in January all the available medical force was employed, four doctors being appointed to each hospital. Some of Dr. Christie's students from Moukden rendered invaluable service. After the battle on the twenty-fourth of February 600 new cases were admitted, another inn was rented, and every available foreigner was pressed into the service. The Chinese officials publicly recognized the value of these services and sought to help in every way. The kind treatment of the wounded demonstrated to the Chinese the good feeling of the foreigners toward them, and they have received a striking lesson in reference to the spirit of benevolence which actuates Christians. The direct and indirect influences which will follow from this hospital service are incalculable.—*The Missionary Herald*.

THE MARTYR OF LIAO-YANG.

It will be remembered that Rev. J. A. Wylie, of the United Presbyterian

Mission, was killed by a mob at Liao-yang in August of last year. Since then the Chinese government has sought, both by ample apologies and by the payment of a money indemnity, to atone as far as possible for the outrage. The Church at Liao-yang has now sent to the father of Mr. Wylie, in Scotland, a touching letter of condolence, from which we make the following extract: "To the Honourable Mr. Wylie,—Your honourable son came across the great seas to arouse the people. Our pastor fell upon trouble, and his soul has gone on high. Among his friends there is no one who does not mourn. What then must be the grief of his parents! We, though ignorant, being afraid that you, honored sir, grieve over the events of our Eastern country, reverently send a letter of comfort. Our pastor died like one of the many prophets of old, and his good deeds, like theirs, will be related after him. He has finished his great work. He has preached by his conduct. He has awoken from his dream, and is now close by the throne of God. Holy living is rewarded with glory. Our pastor has early entered the heavenly city. These thoughts, honored sir, should comfort your heart . . . Our pastor is gone, but his life lives in brightness before the eyes and in the ears of men. In all this, you, honored sir, should find comfort. Our pastor made a life of strict integrity his choice, and has attained to the character of complete benevolence. You, honored sir, will therefore be assuredly able to replace weeping with joy. We wish you unbroken peace." This was signed by eighteen members of the Liao-yang Church, representing the whole body.—*The Missionary Herald*.

"NO CROSS: NO CROWN."

It was an age of questioning, as is every age in which the forces of life awake and rush tumultuously together. Questioning has its perils, grave and, it may be, terrible perils; for it

may mean the shaking of those things which we most wish should remain, and the uprooting of aged growths—too aged ever to take root again—and wreckage far and near. "There is sorrow on the sea; it cannot be quiet." And always on the sea of life when the wind arises—the wind in virtue of which progress can alone be made and unwholesome stagnation avoided—there must be peril of sorrow.

It often seems as though in this life there can never be great good without the instant threatening of great evil. "Their sorrows shall be multiplied that hasten after another God." History and experience prove the truth of this in the sense in which the words were written. And it were vain to shut our eyes to the fact that in a sense precisely contrary the words are also true. For those who by mere inheritance or custom, without thought or earnestness of purpose, serve their own gods, or even their own false conceptions of the true God, when they awake to the need for a pure faith and turn away to search for the living God, will not infrequently find that sorrows are multiplied unto them. "Light is sown for the righteous, and gladness for the upright in heart," but usually they have to wait for the harvest, and the waiting time is quite likely to be tempestuous with rain of tears and wind of conflicting thoughts. They enter into light and gladness, as did our Lord Himself, through darkness, and earthquakes, and strange rendings. It is one of the great errors and follies of the present day that so many men look to comfort and happiness and restful evenness—a mere untroubled voyaging—as the highest good. Christian teachers, in the Press and in the pulpit, are largely to blame for this. They have led the people to form mistaken conceptions of the immediate results which may be expected from faith and duty. They have kept the Cross in the background as an instrument which, having finished its work, is no more needed, save as a memorial of what has been.

Whereas He Who bore the Cross and endured its uttermost pain has taught us distinctly, and in many forms, that each of His followers must, as the first result of discipleship, take up the Cross, and carry it step by step along the pathway of sorrow, which He trod, and be crucified, dying daily that he may rise again, and enter into fulness of joy.

But although there was, as one might say through the working of natural law, peril and sorrow resulting from the questionings which so distinctively belonged to the new age starting from the Cross, there was also the uprising of a great hope, and a prophecy of gain, the worth of which might not be estimated; and the thrilling of the awakening life with a joy unspeakable and full of glory. The stormy wind which here and there marked its paths with wreckage swept away the deadly miasma which silently and surely threatened all spiritual life with extinction. Men and women on all sides were arising and beholding and hearkening, and therefore striving. The old dead life was passing away—it might be in whirlwind gusts which filled men with terror and dismay, but nevertheless most healthfully and to good purpose. The Christ, even in the storm which threatened to overwhelm Him, and with Him everything else true and pure and good, was the supremely triumphant force: "He ruled in the midst of His enemies." And it was the ruling, not of a theory, or of a system of philosophy, or of a new programme, or even of a new faith—for "the teaching" was as yet but faintly outlined and dimly seen even by the most spiritually wise. It was the ruling of a Personality, of a living "Son of Man," who was yet so obviously, even in the eyes of matter-of-fact and hard heathendom, "Son of God" that the great difficulty threatened to be the demonstration, not of His Godhead, but of His manhood. "The hour" had come, towards which all things, from age to age, had

been tending; from which all the light and force renewing life ever since has issued. And in that hour—the central hour in human history—Jesus Christ cried: “I, if I be lifted up from the earth, will draw all men unto Me.” Can we ever forget that those memorable words were spoken in presence of the fact that questioners had come? It is immaterial whether we think of them as Greeks coming out from the great Gentile nation which had destroyed itself by its sensuous worship of the beautiful and by a decadent philosophy not greatly differing from that which deliberately unveiled itself in an English Criminal Court last week, or as men of Israel who had grafted Greek ideas among their ancient Hebrew faiths; they were questioners. They were “among”—how significant is the word!—“them that came up to worship at the feast.” But the cry of their hearts was, “Sir, we would see Jesus.”

It was in that hour of questioning, when Greeks, Jews, Romans, friends and foes, good, bad, and indifferent, leaders of the people and the crowd were all questioning, that Jesus Christ saw the ultimate glory, the ingathering to the Son of Man of the nations, the “much fruit” of the great harvest, the life kept up unto eternal life, the Divine honour of a great service, the judgment of the world, the casting out of the Prince of this world. He saw it all distinctly, and exulted in the vision. But He saw with equal clearness that it all must come, and could only come, through death. “Except a corn of wheat fall into the ground and die, it abideth alone; but if it die, it bringeth forth much fruit.” Is it not the great universal law—the law of all natural life—the law of all spiritual life? Is there not “sorrow” everywhere, not only “on the sea,” but on the land, among men and birds and all the creatures of God, and even in the silent earth, wherever life is disquieted, wherever, because it is awakening to its natural activities, it cannot be

quiet? We must lose to win; we must die to live; we must bear the Cross to wear the crown. Through much tribulation can men and women alone enter the Kingdom, and it is equally true of society and of all great living systems, no matter whether they be religious or political or scientific or social. No one—nothing—can win the highest honour—the honour which the Father gives, except in the service of the Son; and the service of the Son is impossible except to those who follow Him, through Gethsemane and the hooting crowd, to the Cross, which ever stands “in the place of a skull.” We, in this age, which is essentially an age of unrest, in which everything is questioned and probed to its very bottom, need fear no evil, if we remember that Christ abideth for ever, and that for evermore He is being lifted up from the earth and is drawing all the questioners to Himself, Who is the Light, and in whom there is no darkness at all.—*Meth. Record.*

Every man is a missionary for good or for evil. *Dr. Chalmers.*

Those who have had no real sorrows can afford to play with imaginary ones. *Kingsley.*

The daisy follows soft the sun,
And, when his golden work is done,
Sits shyly at his feet.
He, waking, finds the flower near.
“Wherefore, marauder, art thou here?”
“Because, sir, love is sweet!”

We are the flower, Thou the Sun!
Forgive us if, as days decline,
We nearer steal to Thee;
Enamoured of the parting west,
The peace, the flight, the amethyst,
Night's possibility!

FRANKNESS BETWEEN PHYSICIAN AND PATIENT.

The course generally pursued by physicians of withholding from patients who are dangerously ill or affected with an incurable, though perhaps latent, chronic malady definite in-

formation as to their real condition is founded on most creditable motives, chiefly that of saving the patients unnecessary mental distress. Doubtless with some persons and on some occasions, however, it would be well to show the utmost frankness. At all events many persons feel that it would be. A lay correspondent of the *British Medical Journal* puts this feeling very aptly. He admits at the outset that it is not in all cases incumbent on the physician to reveal his suspicions of grave danger, but where a patient is clamorous to know just what is the matter with him and what the probabilities of the case are, he thinks, the physician ought not to give evasive or misleading replies, for the suspense and anxiety that often result from his so doing may be more injurious than a knowledge of the truth would be.

The correspondent proceeds to give some instances to illustrate his meaning. The first is that of a man about town, thirty years old, who fell in an epileptic seizure and cut his head open. His usual physician attended him, and from the patient's account of the occurrence it appeared that he supposed he had tripped over something and been stunned by the fall. The narrator thinks, but he cannot be certain, that the doctor had at least some suspicion of the truth; nevertheless, he encouraged the patient in his theory of the fall and gave him no hint as to what had probably been its real cause. The consequence was that the man kept on in his usual course of life and had several dangerous repetitions of his first attack; and yet the doctor continued to mislead him, although he must then have been fully aware of the nature of the trouble. Now, from what the writer knows of the man and the circumstances of the case, he has no hesitation in saying that had he been told at first what his real malady was he would have been able to avert much unnecessary suffering.

In another instance a man, accompanied by two doctors, whom he was in the habit of consulting, called on an eminent London specialist about a serious ailment from which he was suffering. After hearing the particulars and examining the patient, the specialist told his two professional brethren privately that the case was a very serious one, and that the patient's ultimate recovery was very doubtful; yet he said to the patient himself that his symptoms were favourable and that he might count on resuming his ordinary work in six months if he took complete rest in the meantime. On this opinion the man built up great hopes, but when the term of six months was up they were shattered, and the correspondent feels sure that this caused him keener disappointment than he would have felt if the truth had been broken to him judiciously at the time of the consultation.

Another evil that the correspondent complains of is that the physician, while concealing the truth from the patient, tells it privately to the nurse, who eventually blurts it out to the patient. "I believe," says the writer, "that ninety-nine doctors out of every hundred have tact enough and skill enough to break the worst news to any ordinary patient as gently as it can be done. I lay stress on this quality in doctors," he adds, "in contradistinction to the relatives' less judicious way of telling the truth." There is much food for reflection in what this writer says, and it is quite probable that such considerations as he sets forth ought often to have more weight than is allowed them. There are few well-meant things more injurious than mistaken kindness.—*N. Y. Med. Journal*.

ANARCOTINE—A NEGLECTED ALKALOID OF OPIUM.

At the Annual Meeting of the British Medical Association Sir Wm. Roberts, M.D., F.R.S., President of the Section of Pharmacology

and Therapeutics, delivered the following short address on the above subject :—

I propose to utilise the time allotted to me in calling attention to the properties of a neglected alkaloid of opium, namely, anarcotine. During my travels in India last year, as a member of the Royal Commission on Opium, I heard a good deal about anarcotine and its employment in years gone by as a febrifuge in the treatment of the malarial fevers which are so prevalent in that country.

By far the most abundant alkaloids of opium are morphine and anarcotine, and while morphine represents the anodyne and hypnotic qualities of the drug, anarcotine represents, as I shall presently show, its antimalarial qualities. There are considerable differences in the proportion of morphine and anarcotine in the several varieties of commercial opium. These differences are especially pronounced in the case of Smyrna opium, which is used in this country for medicinal purposes, and Bengal opium, which is popularly used in India. These differences are set forth in round numbers in the subjoined table :—

	Smyrna Opium. Bengal Opium.	
Morphine ..	8 per cent.	4 per cent.
Anarcotine ..	2 " "	6 " "

It will be observed that Bengal opium is comparatively poor in morphine but very rich in anarcotine. Smyrna opium, on the other hand, is very rich in morphine and very poor in anarcotine.

Anarcotine was brought into prominent notice in India about fifty years ago. At that time quinine became very scarce and dear. The supplies of bark from South America were failing, and it had not yet been proved that the quinine-bearing cinchonas could be cultivated with success on the uplands of India. There was thus a serious prospect of a dearth of quinine in India, and the Indian medical authorities had to cast about for some cheaper and more abundant

substitute. Now, opium had long been held in high repute among the natives of India as a remedy and protective against malarial fevers; and the habitual opium eaters were said to enjoy a remarkable immunity from malarial infection. Attention was therefore directed to anarcotine, which is the most abundant alkaloid of Bengal opium, and trials were made of its curative power in malarial fevers. Sir William O'Shaughnessy, in 1838, brought the subject before the Calcutta Medical Society. He gave an account of 32 cases of intermittent and remittent fevers treated with anarcotine. Of these 31 were cured. He also mentioned 100 other cases which had been treated by his pupils and colleagues with equal success.

These results, and others of a like character, induced the Indian authorities to institute further experiments, and these proving favourable, they caused anarcotine to be prepared in quantity at the laboratories of Ghazipur and Patna, and distributed to the medical depôts throughout British India.

Two important communications on the antiperiodic powers of anarcotine lie buried in the medical archives of India, and deserve resuscitation. They are based on a large experience, and they prove incontestably that anarcotine is scarcely inferior—and in some classes of cases is superior—to quinine as an antiperiodic. The first, from Dr. Palmer, is contained in a letter to the Director-General of the Indian Medical Department, and is reprinted in the *Proceedings of the Opium Commission*, vol. v., p. 78. In 1857-9 Dr. Palmer treated at Ghazipur 546 cases of malarial fever with anarcotine, in doses ranging from 1 to 3 grains. Of these 541 were cured and only 5 died. In addition to these 546 officially reported cases, he treated with anarcotine a large number of other cases of malarial fever, amounting in all to little short of 1,000 cases. Summing up his general experience, he states that in 70 per cent. the fever was arrested at the

second paroxysm after the medicine was administered; in 20 per cent. the arrest was equally sure, but was not quite so quick; and in 10 per cent. the medicine did not have any curative effect. He further remarks that there are cases where anarcotine is decidedly more efficacious than quinine—namely, where there is an intolerance of quinine, and where quinine has been given without any effect for a long time.

The second communication is a "Report on Anarcotine" by Dr. Garden, which is printed in the seventh volume of the *Indian Annals of Medical Science*. Dr. Garden succeeded Dr. Palmer in civil charge of the Ghazipur Station in 1859; and at that time a severe outbreak of intermittent fever, of quotidian and tertian type, had to be dealt with. Taking advantage of the opportunity he subjected anarcotine to an extensive trial. He treated altogether 684 cases, and gives details of 194. Of these 194 cases 187 were rapidly cured by anarcotine. It only failed in 7 cases, or 3.6 per cent. It, moreover, cured some cases where quinine had failed. The doses he employed ranged from $1\frac{1}{2}$ to 3 grains. He expresses his general conclusions in the following words: "That it (anarcotine) is equal in value to quinine I do not pretend to say, but that it has a claim to the next place in the ranks of antiperiodics is, I think, an undoubted fact."

Anarcotine continued in large demand in India for several years, and was regularly supplied from the government factories, at the rate of about a hundredweight per annum. Altogether, during the years of quinine dearth, not less than a ton of anarcotine was made and consumed in India in the treatment of malarial fevers. The day of prosperity of anarcotine, however, proved to be brief. With the success of cinchona cultivation on the Darjeeling hills quinine became again abundant and cheap; and the older and better known febrifuge speedily displaced its young-

er rival. At the present day, thanks to the skill and patriotic efforts of Dr. George King, the distinguished superintendent of the Calcutta Botanical Gardens, the natives of India are better provisioned with quinine than any population in the world. Dr. King has brought into operation a scheme whereby the local post offices are supplied with sealed packets, each containing 5 grains of pure quinine. These packets are sold to all comers at the rate of about one farthing a piece of our English money. By the courtesy of Dr. King I am able to show you samples of these wonderful little packets. Some are inscribed with English characters and some with native characters. This system is being gradually extended throughout the length and breadth of British India; and you can easily realise what an incalculable boon this is likely to prove in the fever-stricken regions of that country.

But to return to anarcotine. It is to be observed that Dr. Palmer and Dr. Garden perceived a distinction between quinine and anarcotine, and recognised that there were cases of malarial fever which resisted quinine but yielded to anarcotine. Both observers also noted that in a certain percentage of the cases anarcotine proved wholly ineffective. These discrepancies are probably to be explained by the facts brought to light in recent researches on the infective organisms of paludal fevers. It has been shown that these organisms are of more than one kind, and that each kind corresponds to a particular type of malarial fever. There seems to be valid evidence that in anarcotine we possess a second antiperiodic of great power analogous to, but not identical with, quinine; and the point I wish to press upon those who have opportunities of studying malarial fevers, especially upon investigators in India, is the desirability of subjecting anarcotine to a fresh examination, with a view of ascertaining its value, as compared with quinine, in the different types of malarial infection, and in

cases where quinine has proved ineffective.

I should mention that anarcotine was originally named "narcotine" by its discoverer, Derosne, and this is the name by which it is still generally known. This designation is, however, wholly inappropriate and misleading. The extensive trials made with this substance in India show that, in a pure state, it is quite devoid of narcotic properties. For this reason Dr. Palmer renamed it anarcotine. Dr. Garden adopted this suggestion, and I think it desirable to follow his example. I show you here two fine samples of anarcotine: one was manufactured in London by Hopkin and Williams, of 16, Cross Street, Hatton Garden; the other was procured by Dr. Vaughan Harley from India, where considerable unused stores of anarcotine still exist in medical depôts.

Life is only bright when it proceedeth
Towards a truer, deeper Life above;
Human love is sweetest when it leadeth
To a more divine and perfect Love.
A. A. Procter.

We are never more discontented with others than when we are discontented with ourselves. The consciousness of wrong-doing makes us irritable, and our heart in its cunning quarrels with what is outside it, in order that it may deafen the clamour within.

Amiel.

In a letter to Dr. Atterbury *re* the Opium Report, Dr. Cousland writes: "I certainly think we as an Association should take some notice of the Report of the R. Commission on Opium, not in the form of a protest so much as in the shape of a deliverance on the whole subject with criticisms of the part of the Report that refers to

China. It is quite evident all through that the idea of the pro-opium members is to put opium on a par with alcohol as used in European countries. If they had put it on a par with the use of alcohol in Africa it would be like it. You will see in the Report that they have not gone much into the moral aspect. Precious little most foreigners know or care about the life of Eastern people! We medical missionaries are far better able to deal with this aspect than any non-missionary foreigners in China."

We are sorry to hear that Dr. Kerr, of Canton, has been very ill, and are glad to know that he is now able to resume his work.

Dr. Cecil Davenport writes to tell of his safe arrival in Australia and of the benefit of the change to himself and family: "All much better, but not yet quite well." Speaking of Dr. Atterbury's notice he says, "I must certainly think that the Royal Commission Report should be protested against by us—the M. M. A.—as a body. How medical men can treat the opium question lightly and give evidence to its favour I cannot imagine. What we find, and see, with regard to its abuse and harmfulness, seems just opposite to what government officials find and see. Why is it?! In my answers, printed in the "Report," I gave what statistics I had on the subject. I think if we take up the matter we should do it thoroughly and exhaustively, so as to leave no loop-hole for the other side to get out of. I have only just seen the Report and not read it at all yet. Its effects are felt here, and some damper has been put on the zeal of those working against the evil."

BIRTH.

On Oct. 5th, at Lao-ho-k'ou, the wife of A. G. PARROTT, L.R.C.P., London, M.R.C.S., Eng., of a son.

MARRIAGES.

At Shanghai, on Tuesday, the 23rd Sept., 1895, at the Cathedral, by the Rev. H. C. Hodges, M.A., RICHARD SMYTH, M.B., Trinity College, Dublin, C. M. S. Hospital, Ningpo, to GERTRUDE, eldest daughter of C. STANLEY, Esq., Lancaster Gate, Hyde Park.

At the Cathedral, Shanghai, on the 28th of October, 1895, by the Rev. H. C. Hodges, M.A., GERALD STOCKWELL WALTON, M.B., of Hiao-kan, to KATHERINE JANE TUNNA, of Wem, Shropshire.

ARRIVALS.

At Shanghai, Sept. 14th, Dr. and Mrs. MCCLURE (returned) and child, for Canadian Presbyterian Mission, Honan; also Dr.

LUDLOW, for American Episcopal Mission, Shanghai.

At Shanghai, 5th Oct., Dr. GEO. A. STUART, wife and four children (returned), M. E. Mission.

At Shanghai, 13th Oct., Dr. J. A. ANDERSON (returned), for C. I. M.

At Shanghai, 7th Nov., Dr. J. H. INGRAM, wife and child (returned), A. B. C. F. M.

At Shanghai, 20th Nov., Miss HILL, M.D., for Am. Presbyterian Mission, Ching-chow.

At Shanghai, 1st Dec., Dr. RANKINE, for Church of Scotland Mission, Ichang.

DEPARTURES.

From Shanghai, 5th Oct., Dr. and Mrs. WILSON and 3 children, of C. I. M., for England.

From Shanghai, 8th Nov., Dr. E. C. and Mrs. SMYTH, English Baptist Mission, for England.

OFFICIAL NOTICES.


The following have been duly elected active members of the Association : Sarah A. Poindexter, M.D., of the American Presbyterian Mission, Chi-nan-fu ; and Hermann A. H. Wittenberg, M.D., of the Basel Mission, Kia-ying-chow, Canton Province.

The Editor is wishful to publish a series of papers on the Medical Missionary Hospitals of China, with photographs, where possible, of buildings and past and present staff. His private application on this matter has met with but one response, and he now publicly asks that members of the Association furnish him with the needed papers, as he does not see his way to commence such a series without some prospect of being able to complete it. As photolithographs cannot be obtained in China, and are, in any case, expensive, it would be helpful, and add to the interest of the series of papers, if members would privately provide them (350 in number) for their own papers. It may

be remarked that illustrations from an ordinary photograph are now successfully printed in Japan by collotype and other simple processes at comparatively reasonable rates, and in any quantity.

Dr. J. C. Thomson having resigned the secretaryship of the Society, votes are now called for a new secretary, and should be forwarded to the Editor not later than February 1st, 1896.

Owing to the illness of one of the members of the Committee the Circulars on the Opium Question have been unavoidably delayed. They will be issued as speedily as possible and sent round to each member of the Association.



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